**2019 Spring ETDs**

**Record number: 1**

**FILENAME:**Aggarwal\_fsu\_0071E\_15070.pdf

**TITLE:**Mathematical Modeling and Sensitivity Analysis for Biological Systems

**AUTHOR:**Aggarwal, Manu

**MEMBER (Professor Co-Directing Thesis):**Cogan, Nicholas G.

**MEMBER (Professor Co-Directing Thesis):**Hussaini, M. Yousuff

**MEMBER (University Representative):**Chicken, Eric, 1963-

**MEMBER (Committee Member):**Jain, Harsh Vardhan

**MEMBER (Committee Member):**Bertram, R. (Richard)

**MEMBER (Committee Member):**Mio, Washington

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Mathematics

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (126 pages)

**ABSTRACT:**In this work, we propose a framework to develop testable hypotheses for the effects of changes in the experimental conditions on the dynamics of a biological system using mathematical models. We discuss the uncertainties present in this process and show how information from different experiment regimes can be used to identify a region in the parameter space over which subsequent mathematical analysis can be conducted. To determine the significance of variation in the parameters due to varying experimental conditions, we propose using sensitivity analysis. Using our framework, we hypothesize that the experimentally observed decrease in the survivability of bacterial populations of Xylella fastidiosa (causal agent of Pierce’s Disease) upon addition of zinc, might be because of starvation of the bacteria in the biofilm due to an inhibition of the diffusion of the nutrients through the extracellular matrix of the biofilm. We also show how sensitivity is related to uncertainty and identifiability; and how it can be used to drive analysis of dynamical systems, illustrating it by analyzing a model which simulates bursting oscillations in pancreatic β-cells. For sensitivity analysis, we use Sobol’ indices for which we provide algorithmic improvements towards computational efficiency. We also provide insights into the interpretation of Sobol’ indices, and consequently, define a notion of the importance of parameters in the context of inherently flexible biological systems.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Mathematics in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 16, 2019.

**NOTE (Keywords):**Bacterial growth, Dynamical systems, Mathematical modeling, Sensitivity analysis, Sobol Indices, Xylella fastidiosa

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Nick Cogan, Professor Co-Directing Thesis; M.Y. Hussaini, Professor Co-Directing Thesis; Eric Chicken, University Representative; Harsh Jain, Committee Member; Richard Bertram, Committee Member; Washington Mio, Committee Member.

**SUBJECT:**Applied mathematics

**SUBJECT:**Mathematics

**SUBJECT:**Biometry

**DEGREE:**Doctoral

**Record number: 2**

**FILENAME:**Aitchison\_fsu\_0071E\_14884.pdf

**TITLE:**Hierarchical Free Energy Surfaces of Biomolecules

**AUTHOR:**Aitchison, Erick Wayne

**MEMBER (Professor Directing Dissertation):**Yang, Wei

**MEMBER (University Representative):**Ma, Biwu, 1980-

**MEMBER (Committee Member):**Li, Hong, (Chemistry and Biochemistry)

**MEMBER (Committee Member):**Stefanovic, Branko

**MEMBER (Committee Member):**Stroupe, M. Elizabeth (Margaret Elizabeth)

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Institute of Molecular Biophysics

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (187 pages)

**ABSTRACT:**A major focus of scientific research is to understand biological phenomena and to explain our basic observations of life, however these phenomena have an underlying basis and are the result of many biophysical processes. The study of biophysical processes provides a more detailed examination of the components and actions involved, however many of these processes are not adequately understood and need further exploration. Experimental studies of biophysical processes such biomolecular dynamics, protein folding, molecular transport and enzymatic reactions provide a wealth of knowledge, however all these techniques have their limitations. To be able to adequately understand a biophysical process both spatial and temporal resolution is required and computational biophysical techniques such as molecular dynamics provides the atomic and temporal resolution to further understand these processes. Additionally, computational techniques allow us to be able to not see and observe the motions of biomolecules but to better define these states and motions through the systems free energy surfaces. As stated previously, all techniques have their limitations, including molecular dynamics, with limitations in atomic interaction descriptors or force fields as well as reaching timescales that are relevant to the target biophysical processes. The development of enhanced sampling techniques and more specifically the Orthogonal Space Sampling Scheme have been used to address this timescale issue. In this study of work, we aim to use this enhanced sampling technique to explore several biophysical processes of biomolecules. The first study investigates the reaction site dynamics and how long timescale protein dynamics are involved. By using the High Order Orthogonal Space Tempering technique, we explored a novel tRNA Methyltranferase TrmD which has an unusual fold that is used to bind a cofactor and the conformation of the cofactor when bound is unusual as well. Differences in the tRNA bound ternary complex and binary complex show differences in protein backbone collective motions as well as differing degree of coupling to the reaction site dynamics. The dynamics of binary complex reveal distant protein collective motions that are coupled to the cofactor internal dynamics, whereas the ternary complex shows coupling of methyl transfer distance and protein ligand stabilizing interactions which suggest when tRNA is bound motions are focused on those that are enzymatically productive. The second study investigates the long timescale protein dynamics and its involvement protein misfolding as well as how known perturbations that induce misfolding might change these dynamics. Murine prion protein or PrP is a protein that can undergo a misfolding event that leads to neurodegenerative diseases and has been established as an infectious agent which interactions with the misfolded protein can induce misfolding as well. Misfolding events have been observed in vivo and in vitro under low pH conditions, however the misfolded structure is still yet to be atomically resolved and the experimental data does not provide a defined process for the misfolding event. Simulations using the neutral and charged states of the PrP system and the perturbation of the β-sheet motif that has been suggested is involved in the misfolding process, we observe differences in dynamics of the β-sheet motif as well as overall protein collective motion. The protein in charged state where histidine 187 is protonated destabilizes the protein structure due to the buried charged making β-sheet dynamics easier where in the neutral state we see stronger hydrogen bonding interactions. Additionally, sites that have been implicated through experimental studies have shown correlated motions with the perturbed β-sheet motif. The final study investigates long timescale intrinsic DNA dynamics as well as the effects of 6mA methylation on DNA dynamics. DNA undergoes dynamics that span several levels from local base pair dynamics to global conformational changes. These levels of dynamics play a critical role for processes such as DNA transcription, repair, regulation and replication. Epigenetic regulation, typically, occurs through chemical modifications of the individual bases and methylation has been observed to control several processes. A shift in focus for an understudied methylation modification, 6mA, has found that it plays a more significant role in regulation of eukaryotes but the biophysical nature of the modification is unknown. Simulations of an 33 base pair fragment of DNA in the unmodified and 6mA methylated modification find significant differences in the dynamics across all levels. The unmodified DNA is considerably more flexible and is able to undergo base flipping events whereas the methylated DNA is more rigid and does not undergo any base flipping events in the simulated time. Further analysis shows coupling of the base flipping events and global DNA bending and coupling is loss in the methylated DNA. This loss in coupling is proposed to be caused by two sources: steric clashing of the added methyl groups and neighbor base steps as seen by the reduction in roll fluctuation and changes in water density distributions showing a loss of high water density in the major groove at the modification site and the formation of high water density across a stretch of associated DNA backbone. The results are consistent with previous and recent biophysical evidence which suggests that this fragment becomes more rigid and base pair lifetimes increase across the whole fragment. It is also consistent with biochemical data suggesting that the introduced rigidity prevents nucleosome wrapping.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Institute of Molecular Biophysics in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 19, 2019.

**NOTE (Keywords):**Enhanced Sampling, Free Energy Simulations, Molecular Dynamics

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Wei Yang, Professor Directing Dissertation; Biwu Ma, University Representative; Hong Li, Committee Member; Branko Stefanovic, Committee Member; M. Elizabeth Stroupe, Committee Member.

**SUBJECT:**Biophysics

**DEGREE:**Doctoral

**Record number: 3**

**FILENAME:**Akrasi\_fsu\_0071E\_14931.pdf

**TITLE:**Electrochemical Study of Glycerol Oxidation on Ni-Cu-Sn-P Catalyst in a Redox Flow Cell

**AUTHOR:**Akrasi, James

**MEMBER (Professor Co-Directing Dissertation):**Yeboah, Yaw D.

**MEMBER (Professor Co-Directing Dissertation):**Kalu, E. Eric

**MEMBER (University Representative):**Zheng, Jianping

**MEMBER (Committee Member):**Telotte, John C.

**MEMBER (Committee Member):**Huang, Chen, (Professor of Scientific Computing)

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**FAMU-FSU College of Engineering

**CORPORATE NAME:**Department of Chemical and Biomedical Engineering

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (120 pages)

**ABSTRACT:**Electro-oxidation of alcohols is a very important pathway towards the production of high value chemicals and renewable energy applications. Polyhydric alcohols such as glycerol, are also interesting candidates for direct energy conversion systems due to its low volatility and toxicity. Historically, investigation of the electrocatalysis of glycerol oxidation has been limited to precious metals such as gold, silver and platinum given their enhanced activity and stability. To achieve commercialization however, alternatives such as non-precious metals would be required. Such considerations are necessary with two main strategies: lowering of the amount of precious metal used or the formulation of new electrocatalyst using non-precious metals. This work focuses on the study of electrooxidation of glycerol – as a fuel – on non-precious metal surfaces. The aim of this work is to develop a deeper understanding of the factors involved in the design and optimization of a redox flow cell operating on the mechanism of oxidation of glycerol for the cogeneration of electrical energy and value-added chemicals. In this work, a novel ternary as-deposited catalyst comprising non-precious metal alloy composition, namely nickel, copper and tin on carbon support have been fabricated using the electroless deposition method. The effects of the surface composition have been investigated using physical characterization methods including SEM, EDS and XRD. The electrochemical activity of the as-prepared catalysts towards the glycerol oxidation reaction (GOR) in alkaline medium was evaluated using chronoamperometry, cyclic voltammetry and linear sweep voltammetry at different scan rates. Under optimized conditions, the carbon-supported ternary Ni-Cu-Sn was identified as a highly active catalyst for the GOR and exhibited a shift towards lower onset potential (-0.1 V Ag/AgCl) compared with reported literature values. Using the Group Additivity Method, the study demonstrated theoretically the working principles of a glycerol-fed redox flow cell with aqueous solution of a Fe3+/Fe2+ as the cathode couple. Experimental verification of glycerol oxidation in a glycerol/ Fe3+/Fe2+ cell was also demonstrated. A complete mathematical model of the system based on the boundary layer approach was presented and it showed the coupled effects of mass transport, charge transport and electrochemical kinetics on cell performance while predicting faradaic currents and efficiency. The optimum performance was found to be dependent on applied overpotential and limited by mass transport factors.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Chemical and Biomedical Engineering in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**January 16, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Yaw D. Yeboah, Professor Co-Directing Dissertation; Egwu Eric Kalu, Professor Co-Directing Dissertation; Jim Zheng, University Representative; John Telotte, Committee Member; Chen Huang, Committee Member.

**SUBJECT:**Chemical engineering

**DEGREE:**Doctoral

**Record number: 4**

**FILENAME:**Alfonso\_fsu\_0071N\_15202.pdf

**TITLE:**The Soundscapes of Underprivileged Youth: A Study of Kidznotes After-School Music Program in Urban North Carolina

**AUTHOR:**Alfonso, Elisa Glen

**MEMBER (Professor Directing Thesis):**Gunderson, Frank D.

**MEMBER (Committee Member):**Jackson, Margaret R.

**MEMBER (Committee Member):**Reynolds, John R.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (106 pages)

**ABSTRACT:**Kidznotes is a non-profit organization that provides free after-school music education for underserved populations in urban North Carolina. Kidznotes bases its organizational model on El Sistema; a state-funded music education program started in Venezuela by economist and educator José Abreu in 1987. Kidznotes provides free instruction, a daily snack, instruments, and transportation, all funded by corporate sponsors, concerts performed by Kidznotes’ students, and Kidznotes fundraising events put on by corporate sponsors. As a former employee of the program, and through the fieldwork I conducted at Kidznotes’ Raleigh and Durham summer camps, I gained an immersion and acute awareness to the content and structure of Kidznotes’ soundscapes. The students of Kidznotes are predominately elementary-age, come from low-income neighborhoods in Raleigh and Durham, and attend either Title I or non-profit charter schools in the area. They come to Kidznotes three days during the school week for two hours after a 7-hour school day, and for two hours in the morning on Saturdays. The short time spent in the Kidznotes environment was just a glimpse of what their students experience daily with those that are intended to help them. I theorize that the distinctive aural space of Kidznotes allows for compartmentalization in the minds of underprivileged children, separating their everyday lives from their lives at Kidznotes so that they are given the mental space and sonic authority to assert themselves into the soundscape. This assertion, I propose, is a metaphorical way of challenging the convoluted soundscapes of the outside world, filled with overlapping and contradictory messages children hear that shape their self-perception. This study will then illuminate the ways in which intimacy and music-making as they present themselves within the sonic space of underprivileged youth, make programs like Kidznotes in the North Carolinian context potentially useful for helping minority and low-income children form a healthier sense of self.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the College of Music in partial fulfillment of the requirements for the degree of Master of Music.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 1, 2019.

**NOTE (Keywords):**Children's music, Durham, El Sistema, North Carolina, Raleigh, Sound Studies

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Frank Gunderson, Professor Directing Thesis; Margaret Jackson, Committee Member; John Reynolds, Committee Member.

**SUBJECT:**Music

**SUBJECT:**Education

**SUBJECT:**Acoustics

**DEGREE:**Masters

**Record number: 5**

**FILENAME:**Alicea\_fsu\_0071N\_15231.pdf

**TITLE:**Efficient Control and Locomotion Strategies in Unstructured, Natural Environments: A Study of Vegetation-Rich and Fluid-Covered Terrain

**AUTHOR:**Alicea, Ryan Luis

**MEMBER (Professor Directing Thesis):**Clark, Jonathan E.

**MEMBER (Committee Member):**Hubicki, Christian

**MEMBER (Committee Member):**Shoele, Kourosh

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**FAMU-FSU College of Engineering

**CORPORATE NAME:**Department of Mechanical Engineering

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (65 pages)

**ABSTRACT:**In order to fully exploit robot motion capabilities in complex environments, robots need to reason about obstacles in a non-binary fashion. In this paper, we focus on the modeling and characterization of pliable materials such as tall vegetation. These materials are of interest because they are pervasive in the real world, requiring the robotic vehicle to determine when to traverse or avoid them. This paper develops and experimentally verifies two template models for vegetation-rich terrain. In addition, it presents and validates a methodology to generate predictions of the associated energetic cost incurred by tracked and skid-steered mobile robots when traversing a vegetation patches of variable density. Another class of terrains considered in this work are regions of shallow, dense fluids, such as a beach-head, stream banks, snow or mud. This work examines the behavior of a simulated SLIP runner operating in such a viscous medium. Simulation results show that intelligently retracting the leg during flight can have a profound effect on the maximum achievable velocity of the runner, the stability of the resulting gait, and the cost of transport of the runner. Results also show that \textit{trudging} gaits, in which the leg is positioned behind the center of mass, can be favorable in certain situations in terms of energy consumption and forward velocity.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the Department of Mechanical Engineering in partial fulfillment of the requirements for the degree of Master of Science.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 16, 2019.

**NOTE (Keywords):**Fluid, Legged robot, Mobile robot, Rough Terrain, Running, Vegetation

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Jonathan Clark, Professor Directing Thesis; Christian Hubicki, Committee Member; Kourosh Shoele, Committee Member.

**SUBJECT:**Robotics

**DEGREE:**Masters

**Record number: 6**

**FILENAME:**Allen\_fsu\_0071E\_15108.pdf

**TITLE:**Affirmative Assertions of Black Life: Making Places of Respite in Florida A&M University's Marching 100

**AUTHOR:**Allen, Douglas L. (Douglas Loyd)

**MEMBER (Professor Co-Directing Dissertation):**Lawhon, Mary

**MEMBER (Professor Co-Directing Dissertation):**McCreary, Tyler

**MEMBER (University Representative):**Nair-Collins, Michael

**MEMBER (Committee Member):**Bledsoe, Adam

**MEMBER (Committee Member):**Doel, Ronald Edmund

**MEMBER (Committee Member):**Pierce, Joseph

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Social Sciences and Public Policy

**CORPORATE NAME:**Department of Geography

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (124 pages)

**ABSTRACT:**In this dissertation, I study black geographic visions, experiences, and practices of the Marching 100 (M100) band at Florida A&M University (FAMU) and show how the black place-making practices of the Marching 100 (re)produces the black geographies of FAMU, Tallahassee, and M100 rehearsal spaces. This dissertation both draws from and makes conceptual and empirical contributions to the sub-discipline of black geographies. I show throughout this dissertation the usefulness of taking a place-making approach in studying black geographies and focus on how black place-making can be deployed as part of an affirmative celebration of black life. Conceptually, I draw on black feminist scholars to offer scholars interested in affirmative black geographies places of respite as an analytic and ontological object that is produced by (and productive of) visions and practices of black life. These places, I argue, provide relief from the burdens of oppressive articulations of society and space, and their existence amounts to a critique of these oppressive articulations. These places also offer opportunities to resist and heal harms of oppression. I also analyze the use of celebration as an affirmative, transgressive claiming of place within the city. Such celebrations, I argue, are transgressive place-making practices that can transform places and extend, temporarily, the sense of belonging places of respite provide. I also show, however, the precarity of black place-making claims. Together these chapters show the socio-spatial power of black joy/celebration and highlight the importance of black life in the production of black geographies.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Geography in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 29, 2019.

**NOTE (Keywords):**Black Geographies, HBCU, Place-making, Places of Respite

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Mary Lawhon, Professor Co-Directing Dissertation; Tyler McCreary, Professor Co-Directing Dissertation; Michael Nair-Collins, University Representative; Adam Bledsoe, Committee Member; Ronald Doel, Committee Member; Joseph Pierce, Committee Member.

**SUBJECT:**Geography

**DEGREE:**Doctoral

**Record number: 7**

**FILENAME:**AnthonyJr\_fsu\_0071E\_15066.pdf

**TITLE:**Bridge Inspection: Predicting the Retention of Academically Prepared First-Generation, Low-Income Students Participating in a Summer Bridge Program

**AUTHOR:**Anthony, Marshall Cedric, Jr.

**MEMBER (Professor Directing Dissertation):**Schwartz, Robert A.

**MEMBER (University Representative):**Berry, Frances Stokes

**MEMBER (Committee Member):**Guthrie, Kathy L.

**MEMBER (Committee Member):**Perez-Felkner, Lara

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Education

**CORPORATE NAME:**Department of Educational Leadership and Policy Studies

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (107 pages)

**ABSTRACT:**The narrative of first-generation, low-income students (FGLI) has a long, and often complicated tradition in the history of American higher education. FGLI students experience challenges in postsecondary retention. FGLI students are rapidly enrolling in higher education, but they are dropping out of college at alarming rates. Over 4.5 million FGLI students enroll in higher education, but 46.8% of FGLI students drop out of college and 90% fail to graduate within six years. For the past decade, a growing number of postsecondary institutions have attempted to increase their commitment to serve FGLI students through targeted pipeline interventions, such as summer bridge programs (SBP). Summer bridge programs occur during the summer before incoming college students’ first Fall semester, and last four to six weeks. The majority of older and more recent studies have found positive relationships between developmental SBPs and the retention of academically underprepared and economically disadvantaged students attending community colleges and open-admissions four-year postsecondary institutions. However, fewer empirical studies have been useful predicting the retention of academically prepared FGLI students who participate in non-developmental SBPs at selective institutions. The present study expands our empirical understanding about the relationship between non-developmental SBPs and the retention of academically prepared FGLI undergraduate students attending selective four-year institutions. Specifically, this study focuses on academically prepared FGLI undergraduate students attending Excel State University (ESU), a public, four-year university located in the Southeast. Developmental SBPs are predictive of the retention of academically underprepared FGLI students, but the findings in this present study reveal contrasting results for academically prepared FGLI students in non-developmental SBPs.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Educational Leadership and Policy Studies in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 4, 2019.

**NOTE (Keywords):**Academically prepared, First-generation, Low-income, Student retention, Summer bridge program

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Robert A. Schwartz, Professor Directing Dissertation; Frances Berry, University Representative; Kathy Guthrie, Committee Member; Lara Perez-Felkner, Committee Member.

**SUBJECT:**Education, Higher

**DEGREE:**Doctoral

**Record number: 8**

**FILENAME:**Anyfanti\_fsu\_0071E\_15061.pdf

**TITLE:**Understanding the Transition Experience of Students Transferring from a Latin American International Branch Campus to Its Us Main Campus

**AUTHOR:**Anyfanti, Alexandra

**MEMBER (Professor Co-Directing Dissertation):**Schrader, Linda B.

**MEMBER (Professor Co-Directing Dissertation):**Schwartz, Robert A.

**MEMBER (University Representative):**Jakubowski, Elizabeth M.

**MEMBER (Committee Member):**Iatarola, Patrice

**MEMBER (Committee Member):**Park, Toby J.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Education

**CORPORATE NAME:**Department of Educational Leadership and Policy Studies

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (261 pages)

**ABSTRACT:**Students are in constant transition as they move from one academic institution to another, from one academic level to another, from one major to another, or from college to the world of the work (Killam & Degges-White, 2017). While all of those stages of transition have been the focus of numerous studies, the increasing diversity of student mobility requires additional attention to cover non-traditional or international transitions. With a growing attention on the internationalization of education and cross-border education, International Branch Campuses (IBCs) have expanded in number and significance. The transition of students that transfer from a Latin American IBC to its US main campus offers the opportunity to draw attention to a unique group of students. This study used a sequential mixed methods research design in order to explore the transition experience of the students that transfer from a Latin American IBC to its US main campus upon completing their sophomore year. Most feedback about their experience so far has been anecdotal, and there has not been an empirical study to reveal how these students—mostly international--experience the transition and how they handle the changes. Schlossberg’s (1981) Transition Theory provides a relevant theoretical framework to delineate the transition from the international branch campus to the main campus, and to capture the developmental stages that the transfer students experience. The results of this study can have practical implications for the administrators in both locations. Understanding this transition experience from the vantage point of the students can pave the way for informed changes, additional support mechanisms, and tailored resources. Key words: student transition, international branch campus, Schlossberg, transition theory, mixed methods.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Educational Leadership and Policy Studies in partial fulfillment of the requirements for the degree of Doctor of Education.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 27, 2019.

**NOTE (Keywords):**international branch campus, mixed methods, Schlossberg, student transition, transition theory

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Linda B. Schrader, Professor Co-Directing Dissertation; Robert A. Schwartz, Professor Co-Directing Dissertation; Elizabeth M. Jakubowski, University Representative; Patrice Iatarola, Committee Member; Toby Park, Committee Member.

**SUBJECT:**Educational leadership

**SUBJECT:**Community colleges

**DEGREE:**Doctoral

**Record number: 9**

**FILENAME:**Armstrong\_fsu\_0071E\_15017.pdf

**TITLE:**Re-Defining Fatherhood: Examining the Multidimensionality of Black Fatherhood and Its Association to Child Misconduct and Father-Child Relationship Quality

**AUTHOR:**Armstrong, Joslyn C. (Joslyn Chevette)

**MEMBER (Professor Directing Dissertation):**Rehm, Marsha Lynn

**MEMBER (University Representative):**Jackson, Felecia Jordan

**MEMBER (Committee Member):**Cui, Ming, 1971-

**MEMBER (Committee Member):**Kimmes, Jonathan

**MEMBER (Committee Member):**Harris, Gregory

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Human Sciences

**CORPORATE NAME:**Department of Family and Child Sciences

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (120 pages)

**ABSTRACT:**Black Fatherhood is an understudied area of inquiry within the fatherhood literature. Historically father involvement was examined through three primary dimensions of responsibility, accessibility, and engagement. However, Black father involvement differs in terms of contact, support, and residency in comparison than other racial-ethnic fathers. They face distinct barriers in education, income, incarceration, employment, residency, and depression factors. All of these contextual and structural factors have been shown to influence father involvement. Researchers have yet to define father involvement for Black men including structural dimensions. Researchers have begun to examine father involvement from a multi-faceted perspective. Additionally, researchers have begun to include multidimensional conceptual models grounded in theory when measuring fatherhood. Researchers will need to continue to integrate cultural, economic, and social dimensions to Black fatherhood experiences. Thus, the purpose of this dissertation was to explore expanding the definition of father involvement for Black men to include relational and structural dimensions. The conceptual model was guided by both masculinity and feminist theories and the cultural ecological theory. The theories on gender were used to validate the inclusion of defining fatherhood traditionally with the provider role as well as validate that Black fatherhood was marginalized by traditional fatherhood expectations. The cultural ecological theory supported use of a contextual and ecological perspective using the structural dimensions that were culturally specific to Black father experiences. The research questions for the dissertation were: 1) what is the factor structure underling the 30 items of: relational dimensions of accessibility, contact, and responsibility; and structural dimensions of incarceration history, depression, employment, income, education, and residency status?; 2) what is the association between father interaction and financial provider with child misconduct?; and 3) what is the association between father interaction and financial provider with father-child relationship quality? The researcher conducted an exploratory factor analysis to address research question one that suggested a possible four factor structure for the definition of father involvement for Black men. However, the reliability and correlations for the structural dimensions within the father involvement variable were below standard requirements. Thus, according to the results, there was not enough statistical support to validate the need for a multidimensional definition for Black father involvement. Black father involvement was not defined using structural components. However, the results suggested that Black fatherhood could be defined by contextual and structural components, even if there were minimal percentages. Additionally, the relational factors were used to uncover their association with child misconduct and father-child relationship quality. The researcher conducted two multiple regression analysis models to address research questions two and three. Father interaction and financial provider were significant predictors of child misconduct. The covariates of incarceration, employment, education, and income were significantly associated with child misconduct. Then, father interaction and financial provider were significant predictors of father-child relationship quality. Income was significantly associated with father-child relationship quality. Implications for researchers and clinicians were addressed.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Family and Child Sciences in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 26, 2019.

**NOTE (Keywords):**Black Fatherhood, Child misconduct, Cultural Ecological Theory, Father-child relationship quality, Father involvement, Feminist Theory

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Marsha Rehm, Professor Directing Dissertation; Felecia Jordan Jackson, University Representative; Ming Cui, Committee Member; Jonathan Kimmes, Committee Member; Gregory Harris, Committee Member.

**DEGREE:**Doctoral

**Record number: 10**

**FILENAME:**Austin\_fsu\_0071N\_15195.pdf

**TITLE:**Against Modernity: New Perspectives on the Catholic Worker Communal Movement and the Fight for Dignity in Labor, 1936 to 1945

**AUTHOR:**Austin, Nicholas Scott

**MEMBER (Professor Directing Thesis):**Drake, Jamil William

**MEMBER (Committee Member):**Kalbian, Aline H., 1954-

**MEMBER (Committee Member):**Corrigan, John, 1952-

**MEMBER (Committee Member):**McVicar, Michael J.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Religion

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (102 pages)

**ABSTRACT:**This thesis examines the Catholic Worker movement’s understanding of antimodernism and modernity through its first farming commune, Maryfarm. Created during the middle of the Great Depression, Maryfarm became the initial foray into Peter Maurin’s ideal of the agronomic university. As part of Maurin’s three-point program for social reconstruction, the agronomic university would conceptually seek to re-humanize individuals through the land. According to the Catholic Worker movement’s co-founders, persons had lost their inherently dignified, selfless, and communal nature through modernity’s demystification of the divine, its reliance on science, and its industrial work ethic. By working together, living together, and owning machinery together on the land, modern individuals would relearn their authentic nature, return to modern urban cores, and reconstruct modernity from within. Yet, Maryfarm’s reality proved anathema to its ideal. Within and without, Maryfarm’s critics increasingly perceived the commune’s disorganization through its lax work ethic and its decentralized structure. While some principled Catholics Workers tilled the land, others failed to realize Maurin’s embodied ethic of self-discipline and personal responsibility for the common good. As the Depression’s unemployed and transient homeless congregated at the commune, the reality of Maryfarm’s decentralized structure grew increasingly discordant with Maurin’s ideal. To understand the discrepancy between Maryfarm’s conception and reality, this thesis argues that the Catholic Worker sought to decenter modernity (as epitomized by industrial capitalism) through its personalist philosophy and its understanding of urban and rural space. The Catholic Worker movement rejected modernity’s individuality, profit-drive, and dehumanizing labor ethos. Through a theology of the Body of Christ, it appropriated the era’s emphases on personal responsibility, thrift, and self-discipline and utilized them to address industrial capitalism’s woes. By seeing Christ in others, Catholic Workers would cultivate selfless personal responsibility for the preservation of community. The movement’s conception of the agronomic university also decentered modernity through its emphasis on rural spaces. With the spiritual and degrading hollowness of industrial cities, the land provided an outlet to reconceive one’s personhood. After this cultivation, Catholic Workers would return to urban spaces and spread their revolution of the heart. But as seen through the reality of Maryfarm, Maurin’s notions of self-discipline and personal responsibility only would reify modern conceptions of individuality and independence. To undertake this study, this thesis historiographically intervenes with two new theoretical perspectives. First, it analyzes Catholic Worker personalism through modern art and, subsequently, embodied practice. To situate personalism historically, this thesis uses modern art as a lens to understand an American antimodern milieu, which challenged modernity and industrial capitalism’s perceived hollowness. By seeking something tangible, Catholic Workers utilized the theology of the Body of Christ to discipline the body to articulate notions of individuals working for the common good. From this antimodern aesthetic, this thesis transitions to another perspective, spatial analysis, to evaluate the conceived agronomic university. The farm’s conceived space sought to reorient individuals out of modernity and into a contemporary manifestation of an envisioned medieval community. Yet, the founders recognized the inextricable connection between urban and rural spaces, the former for its food and the latter for its workers. Eventually, these reconstructed persons would return to urban cores to spread their work ethic. With these two perspectives, this thesis examines conceived bodies and conceived space on Maryfarm’s physical land. As a confluence for unemployed workers, Maryfarm became home to various flows of modern individuals, who brought their experiences, hopes, and desires with them. Because of personalism, Maryfarm rejected any emplaced authority. Instead, workers had to cultivate self-discipline and selflessness on their own. As a contested space, Maryfarm allowed individuals to derive their own meanings and work ethics from their experiences, particularly along gendered lines.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Thesis submitted to the Department of Religion in partial fulfillment of the requirements for the degree of Master of Arts.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 8, 2019.

**NOTE (Keywords):**Catholic Worker, Farming, Modern Art, Personalism, Peter Maurin

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Jamil Drake, Professor Directing Thesis; Aline Kalbian, Committee Member; John Corrigan, Committee Member; Michael McVicar, Committee Member.

**SUBJECT:**Religion

**DEGREE:**Masters

**Record number: 11**

**FILENAME:**Bailey\_fsu\_0071E\_15010.pdf

**TITLE:**"Eating the Flesh That She Herself Hath Bred": The Female as Cannibal and Corpse Flesh in Early Modern English Literature

**AUTHOR:**Bailey, Heather

**MEMBER (Professor Directing Dissertation):**Boehrer, Bruce Thomas

**MEMBER (University Representative):**Slaveva-Griffin, Svetla

**MEMBER (Committee Member):**Taylor, Gary, 1953-

**MEMBER (Committee Member):**Fumo, Jamie Claire, 1976-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of English

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (190 pages)

**ABSTRACT:**In this dissertation I examine the gendering of cannibalistic consumption in early modern literature by analyzing literary moments in which a woman is a cannibal or victim of cannibalistic consumption in Edmund Spenser’s The Faerie Queene, John Fletcher and Philip Massinger’s The Sea Voyage and Thomas Middleton and Thomas Dekker’s The Bloody Banquet. I show that colonial and medical discourse intersect in these moments that figure the female body as hungry cannibal or desirable flesh commodity. I argue that these texts respond to and critique what I term the “gendered hierarchies of consumption” that both the colonial and medical tradition relied on specifically through their use of the female body either as victim of cannibalistic consumption or as cannibalistic consumer. These texts are particularly interested in evoking the meanings associated with the female body as a product to be consumed for its healing properties, which was particularly relevant given the practice of corpse pharmacology, in which human flesh was ingested for medicinal purposes. As I show, men consumed the female body in this way even while women themselves also consumed the male body as participants in the corpse pharmacological market. Likewise, colonial discourse figured the land as female to justify male control and domination. Medical and colonial discourse figured the female body as target of male consumption, yet the female cannibal threatens those hierarchies of consumption to instead critique both colonial and ideology and practice.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of English in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**February 13, 2019.

**NOTE (Keywords):**Fletcher, Medicine, Middleton, Post-Colonial, Spenser

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Bruce Boehrer, Professor Directing Dissertation; Svetoslava Slaveva-Griffin, University Representative; Gary Taylor, Committee Member; Jamie Fumo, Committee Member.

**SUBJECT:**Literature

**DEGREE:**Doctoral

**Record number: 12**

**FILENAME:**Bandy\_fsu\_0071N\_15141.pdf

**TITLE:**Environmental Controls on Organic Carbon Productivity in the Midland Basin

**AUTHOR:**Bandy, Terryl L. (Terryl Lynn)

**MEMBER (Professor Directing Thesis):**Owens, Jeremy D.

**MEMBER (Committee Member):**Young, Seth A

**MEMBER (Committee Member):**Wang, Yang, (Professor of Earth Ocean and Atmospheric Science)

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Earth, Ocean and Atmospheric Science

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (49 pages)

**ABSTRACT:**The Kasimovian (late Pennsylvanian) to early Roadian (middle Permian) is an interval of Earth history that experienced relatively stable climatic conditions highlighted by significant glaciation, which might represent an analog for current and future climate dynamics. The carbon isotope (δ13C) record during this interval is relatively stable with a few minor but relatively unexplored fluctuations of ~2‰, suggesting stable global OC burial even as peat and/or coal deposits declined at the end of the Permian. This suggests that carbon burial may have increased elsewhere, or changes in the inputs would be required to maintain a constant isotope record. One possibility is that marine OC burial increased to balance the waning peat and/or coal deposits. Enhanced marine OC productivity can possibly lead to increased burial, which would drive a global positive δ13C excursion. For example, the Midland Basin in Texas is characterized by significant Permian hydrocarbon source rocks, which may have affected the global carbon cycle and therefore isotope record. It is possible that there are other substantial marine sinks of OC during this time, but global distributions are not well-constrained. These deposits, however, may have been manifested as organic-rich black shale, or a small but widespread increase of OC globally, which could have accounted for the stability of the carbon isotope record. Resolving the potential mechanisms that may be driving local and global OC burial is imperative for understanding the Earth system feedbacks associated with ancient and potentially future climate perturbations. This research constrains local and potentially global marine redox conditions using a multi-geochemical proxy approach. Total OC contents and isotopes were analyzed to constrain local to global burial, respectively. Iron speciation and δ34Spyr were utilized to constrain local redox conditions – including local anoxic and euxinic (anoxic and sulfidic water-column) conditions and pyrite burial. Redox-sensitive trace metals were measured to interpret local conditions, which are best utilized in combination with Fe speciation, and under certain circumstances can help to decipher basin restriction or global trace metal drawdown due to widespread euxinia. Last, thallium isotopes have been analyzed on anoxic to euxinic samples to determine the global extent of oxic bottom waters and the basin’s connectivity to the open ocean. The combination of these traditional and novel geochemical redox proxies provide new context to interpret the local depositional environment of the Midland Basin. The collected results show that the black shales in the Midland Basin were deposited under low oxygen conditions and at a few points verging on euxinic. The data suggest that eustatic sea levels increased during sediment deposition. Associated with this sea level rise was an increase in bioessential nutrient availability (e.g., trace metals), which led to increased organic carbon drawdown and preservation within the basin.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the Department of Earth, Ocean and Atmospheric Science in partial fulfillment of the requirements for the degree of Master of Science.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 8, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Jeremy Owens, Professor Directing Thesis; Seth Young, Committee Member; Yang Wang, Committee Member.

**SUBJECT:**Geology

**DEGREE:**Masters

**Record number: 13**

**FILENAME:**Belinskaya\_fsu\_0071E\_14984.pdf

**TITLE:**Internal Narrators and Roman Foundation in Ovid's Fasti

**AUTHOR:**Belinskaya, Anastasia

**MEMBER (Professor Directing Dissertation):**Fulkerson, Laurel, 1972-

**MEMBER (University Representative):**Valisa, Silvia, 1971-

**MEMBER (Committee Member):**Stover, Tim

**MEMBER (Committee Member):**Clark, Jessica Homan, 1980-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Classics

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (271 pages)

**ABSTRACT:**Due to the variety of its subjects, its calendar-based structure, and its tendency to escape the boundaries of genre Ovid’s Fasti can at times give the impression of a disjointed and repetitive text. A key element of the poem, which at times seems to exacerbate this impression, is the multiplicity of voices and characters that present its information and inhabit its landscapes. By analyzing the characterization of these internal narrators and the characters with whom they interact, both from their own perspective and as revealed by their actions, this project shows that the Fasti is not disjoined and repetitive but intricately interwoven and intent on showcasing the variant and multifocal nature of Roman legend and practice. One of the clearest points of divergence among the Fasti’s narrators is on a topic crucial to the poem as well as its historical and political context: Rome’s foundation. My dissertation demonstrates the above through a thorough analysis of key foundational figures in the poem and their depictions of the evolution of Rome, particularly in reference to its landscape, from its pre-foundational state to the time of Augustus. My analysis follows the variant tempora (times) of Roman foundational legend and their characteristic landscapes as represented by Janus, the poet’s narratorial persona, Evander, Carmentis, and Hercules throughout the Fasti. I trace how each of them attempts to assert his or her own version of Rome and her past through a competition of voices within the text. I focus particularly on elements of violence, sacrifice, foreignness, cyclical repetition, birth and destruction, and gendered power in Roman legend and foundation. I use several methodologies in my approach, appropriating some elements of narratology and gender studies while focusing particularly on frequently overlooked elements of the text, including representations of space, the senses, and interacting details of self-representation by internal narrators. Through an analysis of these five figures my study begins to demonstrate an as yet untried approach to an enigmatic text which contributes to its further understanding from both a literary and a political standpoint, especially in the way that the Fasti’s multiplicity of Roman foundational variants stands opposed to the attempted early imperial streamlining of Roman legend.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Classics in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**February 19, 2019.

**NOTE (Keywords):**Fasti, Janus, Ovid, Roman foundation

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Laurel Fulkerson, Professor Directing Dissertation; Silvia Valisa, University Representative; Tim Stover, Committee Member; Jessica H. Clark, Committee Member.

**SUBJECT:**Classical literature

**SUBJECT:**Civilization, Greco-Roman

**DEGREE:**Doctoral

**Record number: 14**

**FILENAME:**Benayoun\_fsu\_0071N\_15112.pdf

**TITLE:**Investigation of Changes in Paleoceanographic Redox State as a Driver for Early Silurian Extinction Events Using Multiple Geochemical Proxies in the Baltic Basin

**AUTHOR:**Benayoun, Emily

**MEMBER (Professor Directing Thesis):**Young, Seth A

**MEMBER (Committee Member):**Owens, Jeremy D.

**MEMBER (Committee Member):**Wang, Yang, (Professor of Earth Ocean and Atmospheric Science)

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Earth, Ocean and Atmospheric Science

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (101 pages)

**ABSTRACT:**Two mudstone-dominated early Silurian drill cores from the Baltic Basin were analyzed for pyrite sulfur isotopes (δ34Spy), organic matter carbon isotopes (δ13Corg), as well as iron speciation and trace metal chemostratigraphy to reconstruct the marine redox state during the early Silurian (Llandovery to earliest Wenlock). Three globally correlated positive carbon isotope excursions (+ 2 to + 3‰ magnitude shifts) are recorded within the Baltic Basin. The late Aeronian CIE and coincident positive δ34Spy (~ + 22‰ magnitude) shift are recorded in the proximal shelf and distal slope sections within the Lituigraptus convolutus- Sprirograptus guerichi Graptolite Zones. The rising limb of the Valgu CIE and coincident positive δ34Spy (+ 10‰ magnitude) shift are recorded in the distal slope section within the Streprograptus crispus Graptolite Zone. Additionally, the rising limb of the Ireviken CIE and coincident positive δ34Spy (+ 8‰ magnitude) shift are recorded in the proximal shelf section within the Cyrtograptus murchisoni- Monograptus firmus Graptolite Zones. These parallel isotope trends can be explained by changes in marine redox state that resulted in increases in microbially mediated pyrite formation and burial along with enhanced organic matter burial rates. Iron geochemistry independently constrains euxinic deposition (i.e., anoxic and sulfidic bottom waters) during the rise of the late Aeronian CIE with the possibility of similar reducing conditions during the rise of the Valgu and Ireviken CIEs. Coincident enrichments in vanadium (V) and molybdenum (Mo) concentrations during the rising limb of the late Aeronian CIE suggest the expansion from oxygen-deficient but non-sulfidic waters to fully euxinic within the Baltic Basin. Sedimentary iron and trace element enrichment trends are broadly consistent with oxygen minimum zone (OMZ)-type redox conditions in the water column and sediments porewaters with additional contributions from a manganese (Mn)- and Fe- shuttle. Intermittent expansion of an OMZ was likely controlled by local fluctuations in sea-level and provides a reasonable explanation for graptolite and conodont extinction events that occur during the late Aeronian and Valgu CIE intervals. An expansion of reducing conditions would have reduced habitable environments for marine organisms and geochemical evidence for reducing conditions is broadly consistent with extinction events recorded in the Baltic Basin during this period of the early Silurian.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Thesis submitted to the Department of Earth, Ocean and Atmospheric Science in partial fulfillment of the requirements for the degree of Master of Science.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 5, 2019.

**NOTE (Keywords):**biogeochemistry, carbon isotopes, euxinia, extinction, sulfur isotopes, trace metals

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Seth A. Young, Professor Directing Thesis; Jeremy D. Owens, Committee Member; Yang Wang, Committee Member.

**SUBJECT:**Geology

**DEGREE:**Masters

**Record number: 15**

**FILENAME:**Bighta\_fsu\_0071E\_15088.pdf

**TITLE:**Illustration and Realism in the Nineteenth-Century British Novel

**AUTHOR:**Bighta, Anna

**MEMBER (Professor Directing Dissertation):**Kennedy, Meegan, 1966-

**MEMBER (University Representative):**Williamson, George S.

**MEMBER (Committee Member):**Faulk, Barry J.

**MEMBER (Committee Member):**Gants, David L.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of English

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (149 pages)

**ABSTRACT:**This dissertation shows that print illustration – particularly its technologies, its financial implications, and its role in scientific representation – influenced three major nineteenth-century British writers as they built their versions of realism for their long fiction. William Makepeace Thackeray was inspired by lithography and the scientific atlas to make fast, socially-relevant characters which he catalogued in The Book of Snobs. Collaboration with John Everett Millais helped Anthony Trollope in the mid-century develop a realism in his Barsetshire novels that required close observation and included careful details. Toward the end of the century, Thomas Hardy’s engagement with George Du Maurier in A Laodicean helped Hardy develop a realism that both showed the instability of the visual representation and showed how images were made. All three novelists were interested, in their own ways, with the connection between seeing and knowing.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of English in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 27, 2019.

**NOTE (Keywords):**Illustration, Nineteenth Century, Novel, Realism

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Meegan Hanson, Professor Directing Dissertation; George S. Williamson, University Representative; Barry Faulk, Committee Member; David Gants, Committee Member.

**SUBJECT:**British literature

**SUBJECT:**Irish literature

**SUBJECT:**English literature

**DEGREE:**Doctoral

**Record number: 16**

**FILENAME:**Bittner\_fsu\_0071E\_15180.pdf

**TITLE:**Consumer Motivations and Responses to Rejection

**AUTHOR:**Bittner, Samantha

**MEMBER (Professor Directing Dissertation):**Hofacker, Charles F.

**MEMBER (University Representative):**Van Iddekinge, Chad H.

**MEMBER (Committee Member):**Fajardo, Tatiana M.

**MEMBER (Committee Member):**Lee, Peter J.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Business

**CORPORATE NAME:**Department of Marketing

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (124 pages)

**ABSTRACT:**Consumers can experience rejection in a variety of marketing contexts. Rejection may originate from consumer-to-consumer interactions in brand affiliated groups. Business-to-consumer interactions may also result in consumer rejection. Indeed, there are multiple reasons a firm might decide to reject a consumer and deny them access to particular goods and/or services. The research on social exclusion and consumer rejection, while extensive, has largely focused on how experiencing rejecting from a peer affects consumers’ psychological well-being and attitude towards others. In contrast, much less is known about the effects of acting as a source of exclusion. In addition, only a handful of researchers have considered the influence of rejection on an individual’s consumption behavior. Furthermore, the effects of experiencing rejection at the hands of the firm have not been extensively studied. In this research, I address these weaknesses by examining the underlying motivations that lead consumers to engage in exclusionary behavior. The first context in which this is considered is brand communities and club membership (Essay 1). Consumers are found to have different motivations when participating in brand related affiliated groups, which manifests in opposing behaviors. Individuals high (low) in domain-relevant experience are driven by a desire for status (belonging) in the community. As a result, high (low) experience individuals are more likely to engage in exclusionary (inclusionary) behavior and exhibit increased brand commitment and purchase intentions after excluding (including) another individual. The second context which I examine is that of consumer response to promotion denial (Essay 2). Results indicate that responses to a denial are influenced by the value of the denied promotion. More specifically, a quadratic relationship is found to exist between promotion value and future purchase intentions.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Marketing in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 15, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Charles Hofacker, Professor Directing Dissertation; Chad Van Iddekinge, University Representative; Tatiana Fajardo, Committee Member; Pui Wan "Ruby" Lee, Committee Member.

**SUBJECT:**Marketing

**DEGREE:**Doctoral

**Record number: 17**

**FILENAME:**Blakely\_fsu\_0071E\_15022.pdf

**TITLE:**Class Size and Student Achievement: Evidence from Florida

**AUTHOR:**Blakely, Jonathan K.

**MEMBER (Professor Directing Dissertation):**Herrington, Carolyn D.

**MEMBER (University Representative):**Berry, Frances Stokes

**MEMBER (Committee Member):**Gawlik, Marytza A., 1973-

**MEMBER (Committee Member):**Park, Toby J.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Education

**CORPORATE NAME:**Department of Educational Leadership and Policy Studies

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (94 pages)

**ABSTRACT:**Reforms and interventions in education attempt to address a wide number of educational inequities and inequalities. One method of improving educational outcomes for all students in Florida included a policy that reduced class sizes for all grade levels. Using a non-experimental approach, this dissertation studied whether class size in Florida had an effect on student achievement in grade levels 4 through 8. This study asked if there was an association between class size and student achievement by subject areas of reading and math for student subgroups as specified by gender, minority status, English language learner status, exceptional student education status, or socio-economic status. Hierarchical linear modeling was used to statistically analyze a nested data structure consisting of students within classrooms. The first research question determined whether or not an association existed between class size and student achievement by subject areas of reading and math and found that yes, an association does exist between class size and student achievement for both reading and math. The second research question determined whether or not an association existed between student achievement and class size by subject area and student subgroups and found that yes, an association exists between class size and student achievement in both reading and math for most subgroups. The primary result of this study was the statistically significant association between student achievement and class size, with all models showing positive effects (0.07 to 1.92) on student achievement as average class size increased. This was true for both reading and math subject areas, with patterns holding true for students in all subgroups except ELL. Effect sizes for class size were typically very small (0.07 to 0.25), with larger effect sizes of 1.59 to 1.92 seen only for students with disabilities in both reading and math. Recommendations for further research include analyzing class size and student achievement at more granular levels within a single school district to account for additional educational interventions and using more advanced forms of hierarchical linear modeling to examine growth in student achievement over time. A final recommendation is for policy makers to consider alternative reforms or strategies to improve student achievement that are more cost-effective or have been proven to result in larger impacts on student learning than class size reduction.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Educational Leadership and Policy Studies in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 4, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Carolyn Herrington, Professor Directing Dissertation; Frances Berry, University Representative; Marytza Gawlik, Committee Member; Toby Park, Committee Member.

**SUBJECT:**Education

**DEGREE:**Doctoral

**Record number: 18**

**FILENAME:**Boggs\_fsu\_0071E\_15073.pdf

**TITLE:**Distance Education and Horizontal Stratification in U.S. Higher Education

**AUTHOR:**Boggs, Kaley Dyan

**MEMBER (Professor Directing Dissertation):**Reynolds, John R.

**MEMBER (University Representative):**Schwartz, Robert A.

**MEMBER (Committee Member):**Padavic, Irene

**MEMBER (Committee Member):**Brewster, Karen

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Social Sciences and Public Policy

**CORPORATE NAME:**Department of Sociology

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (117 pages)

**ABSTRACT:**Purpose: Distance education has become an increasingly common mode of instruction in U.S. higher education, and today more than a quarter of students are enrolled in distance courses or programs that are fully online. This dissertation asks two fundamental questions related to the growing presence of distance-based instruction in U.S. higher education. First, does increased college access in the form of distance enrollments contribute to horizontal postsecondary stratification? Second, is the adoption of distance education indicative of academic capitalism? I make use of two broad theoretical perspectives to frame my analysis and develop a set of hypotheses concerning the types of colleges and universities that enroll greater percentages of undergraduates in at least one distance course or completely online degree programs. Drawing on the “effectively maintained inequality” (EMI) perspective, I hypothesize that enrollment in distance courses and programs will be higher at less selective colleges and universities and will vary by institutional sector. Regarding sector, I hypothesize that distance enrollments are highest at for-profit institutions, and higher at public institutions than at private. Based on the “academic capitalism” perspective, I hypothesize that institutions with lower levels of financial resources will rely more heavily on distance education as a revenue source and a means of reducing costs. Methods: I test these hypotheses using the NCES Integrated Postsecondary Education Data Set for 2015-16. The sample of consists of 2,180 four-year postsecondary institutions. Hypotheses are tested using one-way and two-way ANOVA models and bivariate correlation analyses. Results: Enrollment in distance education varies significantly by level of selectivity, sector, and financial resources. As hypothesized, less selective institutions have significantly higher percentages of distance enrollment, but interesting subtleties emerge between sectors. Within public institutions distance course and program enrollment are fairly steady across selectivity levels, while enrollment differs substantially among private colleges and universities. Additional analyses of student composition by sector and selectivity confirm that social inequalities by race and class are not likely diminished by distance education. Institutions with fewer resources and expenditures have higher levels of distance education, as expected. Specifically, private institutions with fewer financial resources have greater distance course and program enrollment, and for-profits with fewer resources have greater distance program enrollment. However, overall revenue and expenses are not related to distance enrollment among public universities. Exploratory analysis of detailed revenue and expenditures paint a more nuanced picture of the financial resources that vary with greater reliance on distance courses and programs. Conclusion: The growth of distance enrollments does not reduce social stratification in higher education because distance enrollment growth is occurring disproportionately at less selective private and for-profit colleges and universities—institutions that are costlier to attend, have lower economic payoffs, and disproportionately enroll students of color and lower income college students. The growth of distance enrollment is also consistent with depiction of higher education as an academic capitalist regime, in that distance enrollment appears to function as a revenue source for colleges and universities, particularly for those outside the public sector.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Sociology in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 27, 2019.

**NOTE (Keywords):**education, financial, postsecondary, sector, selectivity, sociology

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**John Reynolds, Professor Directing Dissertation; Robert A. Schwartz, University Representative; Irene Padavic, Committee Member; Karen Brewster, Committee Member.

**SUBJECT:**Educational sociology

**SUBJECT:**Education and state

**DEGREE:**Doctoral

**Record number: 19**

**FILENAME:**Borkowski\_fsu\_0071E\_15105.pdf

**TITLE:**From Serving One's Country to Serving Time: The Effects of Military Service on Prison Misconduct and Post-Release Recidivism

**AUTHOR:**Borkowski, Elizabeth Lynn

**MEMBER (Professor Directing Dissertation):**Bales, William D.

**MEMBER (University Representative):**Jones, Maxine Deloris

**MEMBER (Committee Member):**Hay, Carter H.

**MEMBER (Committee Member):**Warren, Patricia Y.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Criminology and Criminal Justice

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (152 pages)

**ABSTRACT:**To date, the empirical literature exploring the effect of prior military service has focused almost exclusively on crime outcomes. There is extensive literature exploring the effect of prior military service on the likelihood of being arrested, sentencing outcomes, and sentenced to prison. However, there remains a lack of understanding regard the various effects of prior military service on prison misconduct and post-prison recidivism outcomes for released inmates. This dissertation adds to the literature on prison misconduct and post-release recidivism by examining the effect of military service, and among veteran inmates the effect of prior service in each of the four military branches, on offender misconduct in prison and recidivism outcomes. Using data from the Florida Department of Corrections (FDC), the current study examines the effects of prior military service in comparison to release from prison with no prior military history for a cohort of 187,739 inmates released from Florida’s prisons between January 2004 and December 2011. Given the lack of empirical research surrounding this topic, an extensive analysis of the two groups (veterans and nonveterans), and analyses among veterans across the four military branches (Army, Navy, Air Force, and Marines), is conduct first in order to establish a basis for further analyses. Next, logistic regression, ordinary least squares (OLS), and survival analysis methods are used to examine factors that predict the effect of military service on prison misconduct and the likelihood of post-prison recidivism within one, two, and three years of prison release. Findings indicate that prior military service has an effect on prison misconduct and post-release recidivism. Theoretical and policy implications are also discussed.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the College of Criminology and Criminal Justice in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 18, 2019.

**NOTE (Keywords):**military, prison misconduct, recidivism, veterans

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**William D. Bales, Professor Directing Dissertation; Maxine Deloris Jones, University Representative; Carter Hay, Committee Member; Patricia Y. Warren, Committee Member.

**SUBJECT:**Criminology

**DEGREE:**Doctoral

**Record number: 20**

**FILENAME:**Boucher\_fsu\_0071N\_15209.pdf

**TITLE:**The Pursuit of Equality the Continuation of Colonialism in Vietnam

**AUTHOR:**Boucher, Robert Arthur

**MEMBER (Professor Directing Thesis):**Grant, Jonathan A., 1963-

**MEMBER (Committee Member):**Blaufarb, Rafe

**MEMBER (Committee Member):**Özok-Gündoğan, Nilay

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of History

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (157 pages)

**ABSTRACT:**Much of the scholarship on the colonial sphere remains focused on the ways that subalterns subverted colonial power and discourse, however little focus has centered on the way that colonized at times reified and perpetuated the ideas of the civilizing mission. In the case of Vietnam, over the course of approximately four decades Vietnamese intellectuals quickly swung from seeing the French as barbarians to a dynamic, modern power that should be learned from. In the process, modernization and development came to be synonymous with everything from the West while tradition was invented as the old teachings. Importantly, while independence was achieved after much bloodshed and effort, the new Vietnamese state failed in reality to extricate itself from the grasp of European universalist ideas born out of the French Revolution. From efforts to open “New Learning” schools to demands of equality to French citizens and access to basic rights, the Vietnamese vision of a New Vietnam slowly became constrained to the path of the international community of nation-states. Ho Chi Minh would declare independence in the name of Life, Liberty, and the pursuit of happiness rather than the loss of the Mandate of Heaven. As such, this paper traces the variety of factors that influenced the manifold nature of colonialism and how rather than existing in a post-colonial world, the ideas of the mission civilisatrice have been continued by the powers which rebelled against it.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the Department of History in partial fulfillment of the requirements for the degree of Master of Arts.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 5, 2019.

**NOTE (Keywords):**Colonialism, French Empire, Indochina, Internationalism, Post-Colonial, Vietnam

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Jonathan A. Grant, Professor Directing Thesis; Nilay Ozok-Gundogan, Committee Member; Rafe Blaufarb, Committee Member.

**SUBJECT:**Asia--History

**SUBJECT:**Europe--History

**SUBJECT:**History

**DEGREE:**Masters

**Record number: 21**

**FILENAME:**Brown\_fsu\_0071E\_15074.pdf

**TITLE:**Modeling Towards Dynamic Decomposition Based Control for Multi-Modal Legged Robotics

**AUTHOR:**Brown, Jason Michael

**MEMBER (Professor Directing Thesis):**Clark, Jonathan E.

**MEMBER (University Representative):**Roberts, Rodney G.

**MEMBER (Committee Member):**Oates, William

**MEMBER (Committee Member):**Hollis, Patrick J.

**MEMBER (Committee Member):**Ordonez, Camilo, 1979-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**FAMU-FSU College of Engineering

**CORPORATE NAME:**Department of Mechanical Engineering

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (122 pages)

**ABSTRACT:**The flexibility of animals limbs combined with the robustness of locomotion traversing unstructured terrains allow animals such as geckos and cockroaches to move dynamically in both horizontal and vertical domains. To capture this biological inspiration and the features which enable the performance, several approaches have been used including attempting to capture the morphological complexity of animals as well as determining shared fundamental dynamics of numerous animal in a single domain. These tools have lead to numerous robotics platforms along with the associated controllers which are able to either approach the flexibility or locomotive speeds of their biological inspiration. However, the robustness seen with biology has not been achieved with animal like speeds. This motivates the exploration of the dynamic understanding required to develop control which supplements and does not interfere with the passive dynamics representative of animal locomotion. This dissertation focuses on several topics related to the dynamics and control within the horizontal and vertical domains. These include defining three distinct dynamic gaits within the vertical domain (walking, running with a flight phase, and compliant running) along the associated implications of these gaits, determining the impact of power input on the gaits and stability selected as slope is varied from horizontal to vertical, and testing the robustness of a new dynamic decomposition based control for horizontal domain running. The resulting insights of this work will enable dynamic decomposition based control to be extended for the first time to the vertical domain and will provide insights into the design of future multi-modal robotic platforms

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Mechanical Engineering in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 2, 2019.

**NOTE (Keywords):**Biologically Inspired Robotics, Climbing Robotics, Control, Dynamic, Legged Robotics, Simulation

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Jonathan Clark, Professor Directing Thesis; Rodney Roberts, University Representative; William Oates, Committee Member; Patrick Hollis, Committee Member; Camilo Ordonez, Committee Member.

**SUBJECT:**Robotics

**DEGREE:**Doctoral

**Record number: 22**

**FILENAME:**Burbrink\_fsu\_0071N\_15229.pdf

**TITLE:**Dysfunctional Career Thinking and Career Decision State in Collegiate Student Athletes and Non-Student Athletes

**AUTHOR:**Burbrink, Ivey Elizabeth

**MEMBER (Professor Directing Thesis):**Osborn, Debra S., 1968-

**MEMBER (Committee Member):**Becker, Martin Swanbrow

**MEMBER (Committee Member):**Dong, Shengli

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Education

**CORPORATE NAME:**Department of Educational Psychology and Learning Systems

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (65 pages)

**ABSTRACT:**This study used the Career Thoughts Inventory (CTI) (CTI; Sampson et al., 1996b) and the Career State Inventory (CSI) (Leierer, Peterson, & Reardon, 2018) to examine the relationship between dysfunctional career thinking (DCT) and career decision state (CDS) in collegiate student athletes versus non-student athletes using archival data of students who were enrolled in an undergraduate career planning class. The sample included Division 1 collegiate student athletes (N = 254) and non-student athletes (N = 39) from all undergraduate grade levels attending a public university in the southeastern part of the United States, who registered for and attended an Introduction to Career Development course. The CTI was used to measure dysfunctional or negative career thinking (DCT), specifically Decision-Making Confusion (DMC), Commitment Anxiety (CA), and External Conflict (EC). The CSI was used to assess the readiness of the students to participate in the career problem solving and decision-making process and was used in the present study to measure career decision state (CDS), specifically (1) certainty about career decisions, (2) satisfaction with these decisions, and (3) vocational clarity. A one-way between-groups analysis of variance showed no statistically significant differences between student athlete and non-student athlete CTI and CSI scores, thus further analyses were not performed. Multiple and linear regression analyses found significant relationships regarding DCM and CTI total scores predicting Certainty, Satisfaction, Clarity, and CSI total scores with non-student athletes. Additionally, multiple and linear regression analyses found significant relationships regarding DMC and CTI total scores predicting Clarity with student athletes. A discussion of the findings is presented, including an analysis of the results, possible limitations, and implications for research and teaching.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the Department of Educational Psychology and Learning Systems in partial fulfillment of the requirements for the degree of Master of Science.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 16, 2019.

**NOTE (Keywords):**career decision state, Career State Inventory, Career Thoughts Inventory, collegiate student athletes, dysfunctional career thinking, non-student athletes

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Debra Osborn, Professor Directing Thesis; Martin Swanbrow Becker, Committee Member; Shengli Dong, Committee Member.

**SUBJECT:**Counseling psychology

**DEGREE:**Masters

**Record number: 23**

**FILENAME:**Camareno\_fsu\_0071N\_15243.pdf

**TITLE:**An Analysis of Music Therapy and Music Education Intergenerational Programs and Their Importance to the Psychosocial, Physical, and Cognitive Needs of Older Adults

**AUTHOR:**Camareno, Nicole

**MEMBER (Professor Directing Thesis):**Gooding, Lori F. (Lori Fogus)

**MEMBER (Committee Member):**Standley, Jayne M.

**MEMBER (Committee Member):**Gregory, Sarah Dianne

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (46 pages)

**ABSTRACT:**The purposes of this study were to: (a) analyze trends in music therapy and music education intergenerational programs pertaining to older adults; (b) identify the most important components pertaining to the psychosocial, physical, and cognitive needs of older adults in intergenerational programs; and (c) demonstrate their importance to the older adult population. Results indicated that intergenerational music programs were increased community engagement and were more effective in larger groups because more people could benefit from the outcomes of such programs. Furthermore, a systematic literature search indicated that both music therapy and music education intergenerational programs encompass the psychosocial, physical, and cognitive needs of older adults through interventions such as increasing breath support, interacting with a younger generation, and including choreographed movements. In conclusion, both music therapy and music education intergenerational programs are important to the older adult population; while the areas focus on dissimilar interventions at times, the goal is always the same: increase the quality of life in those actively aging.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the College of Music in partial fulfillment of the requirements for the degree of Master of Music.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 22, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Lori Gooding, Professor Directing Thesis; Jayne M. Standley, Committee Member; Dianne Gregory, Committee Member.

**DEGREE:**Masters

**Record number: 24**

**FILENAME:**Campbell\_fsu\_0071E\_15095.pdf

**TITLE:**Analysis of Microbial Abundance, Metabolic Potential, and Transcriptional Activity in the Gulf of Mexico "Deadzone" Reveals an Ammonia-Oxidizing Archaeal Hotspot

**AUTHOR:**Campbell, Lauren Gillies

**MEMBER (Professor Directing Dissertation):**Mason, Olivia Underwood

**MEMBER (University Representative):**Miller, Thomas E., (Professor of Biological Science)

**MEMBER (Committee Member):**Chanton, Jeffrey P.

**MEMBER (Committee Member):**Huettel, Markus

**MEMBER (Committee Member):**Knapp, Angela Noel, 1976-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Earth, Ocean and Atmospheric Science

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (174 pages)

**ABSTRACT:**The northern Gulf of Mexico (nGOM) is home to one of the largest eutrophication-driven seasonal hypoxic zones in the world. These hypoxic zones are also known as “dead zones” because dissolved oxygen (DO) concentrations of ≤ 2 mg L-1 are inhospitable to economically valuable fisheries. However, microorganisms flourish in “dead zones” because of their ability to utilize diverse metabolic pathways and/or by carrying out metabolic function at low oxygen concentrations. Decades worth of geochemical data has provided fine-scale resolution on nutrient and oxygen dynamics in the nGOM, however little is known about microbial community structure and activity despite the implication that microbial respiration is responsible for forming low DO conditions. To begin to fill this knowledge gap, water column samples collected across the nGOM shelf for two consecutive hypoxic seasons in July 2013 (Y13) and 2014 (Y14) were analyzed using 16S rRNA gene iTag sequencing, quantification of bacterial and thaumarchaeal 16S rRNA genes and archaeal ammonia-monooxygenase (amoA) genes using quantitative polymerase chain reaction (qPCR) assays, as well as shotgun metagenomic and metatranscriptomic sequencing of a subset of Y13 samples. In chapter two of this dissertation, analysis of the microbial community16S rRNA gene sequence data (iTag) in Y13 water column samples showed that ammonia-oxidizing Thaumarchaeota (100% similar to Nitrosopumilus maritimus) abundances were significantly enriched in hypoxic samples and inversely correlated with DO concentrations. In agreement with the iTag data, subsequent analyses of the absolute abundance (qPCR) of Thaumarchaeota 16S rRNA and amoA gene copy numbers revealed these data to be significantly more abundant in hypoxic samples and inversely correlated with DO concentrations. These results of significantly higher Thaumarchaeota abundances and amoA gene copy numbers in hypoxic samples were confirmed with analyses of Y14 data, as shown in chapter three. For both Y13 and Y14 samples, further analysis of thaumarchaeal microdiversity using oligotyping of iTag sequence data showed single nucleotide variation among Nitrosopumilus 16S rRNA gene sequences. One oligotype was significantly more abundant in hypoxic compared to oxic samples and significantly correlated with low DO, revealing a low DO adapted Nitrosopumilus oligotype in the nGOM. To better understand the ecological significance of the high thaumarchaeal abundances in the hypoxic zone shown in chapters two and three, shotgun metagenomic and metatranscriptomic sequencing was carried out on a subset of samples from Y13. Annotation of unassembled metatranscriptomic reads revealed that functional genes involved in nitrification and ammonia assimilation were some of the most abundant transcripts in both hypoxic and oxic samples, with urease enzymes being significantly more abundant in hypoxic samples. Chapter four described the physiological and metabolic activity of two novel Thaumarchaeota metagenome assembled genomes (MAGs) (estimated 79% and 96% complete). The 16S rRNA gene sequence of one MAG had a 98% identity with Nitrosopumilus maritimus SCM1 and was 100% similar to the dominant Thaumarchaeota (OTU4369009) in the Y13 nGOM. Bioinformatic analyses of these MAGs revealed that one contained transcripts coding for urea utilization, consistent with the analysis of unassembled metatranscriptomic sequences. Both MAGs recruited more metatranscriptomic reads derived from hypoxic samples (≤ 2 mg L-1) compared to oxic samples, revealing an active Thaumarchaeota population in the hypoxic zone where archaeal ammonia oxidation may be influenced by local changes in DO concentrations. Collectively, analyses of the datasets in this dissertation that include data from iTag sequencing, qPCR assays, and meta-omics sequencing, found that seasonal hypoxic conditions influenced Thaumarchaeota abundance, activity and diversity, with the annual nGOM “dead zone” emerging as a niche for low DO-adapted, cosmopolitan ammonia-oxidizing archaeal (AOA). Overall, the findings in this dissertation provided significant new insights into the ecology and biogeochemical contributions of marine Archaea, particularly in regards to the nitrogen cycle during a eutrophication-driven hypoxic event.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Earth, Ocean and Atmospheric Science in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 2, 2019.

**NOTE (Keywords):**Ammonia oxidation, Archaea, Dead zones, Gulf of Mexico, iTag, Metagenomics

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Olivia U. Mason, Professor Directing Dissertation; Thomas E. (Tom) Miller, University Representative; Jeffrey P. Chanton, Committee Member; Markus Huettel, Committee Member; Angela Knapp, Committee Member.

**SUBJECT:**Marine biology

**SUBJECT:**Environmental sciences

**DEGREE:**Doctoral

**Record number: 25**

**FILENAME:**Cannon\_fsu\_0071E\_15063.pdf

**TITLE:**Search for New and Unusual Strangeonia States Using γp → pφη with GlueX at Thomas Jefferson National Accelerator Facility

**AUTHOR:**Cannon, Bradford Emerson

**MEMBER (Professor Directing Dissertation):**Eugenio, Paul Michael, 1966-

**MEMBER (University Representative):**Aldrovandi, Ettore

**MEMBER (Committee Member):**Capstick, Simon, 1958-

**MEMBER (Committee Member):**Wahl, Horst

**MEMBER (Committee Member):**Crede, Volker

**MEMBER (Committee Member):**Ostrovidov, Alexander

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Physics

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (199 pages)

**ABSTRACT:**We perform an analysis dedicated to the search for new and unusual strangeonium states produced in the reaction γp → pφη. The data used for this analysis was recorded during the Spring 2017 physics run for Hall D of Thomas Jefferson National Accelerator Facility, where the GlueX experiment is located. The GlueX experiment uses a linearly polarized coherent bremsstrahlung beam of up to 12 GeV in energy. This photon beam interacts with a stationary liquid hydrogen target located inside the GlueX detector. The subsequent photoproduction will provide final states ideal for studying both exotic and non-exotic ss ̄ mesons. After all cuts, a total of four different selection methods were used to study the φη parent state. Three of these methods used an event by event probabilistic weighting method in order to separate signal from background, and the fourth method was simply an elliptical subtraction which did not utilize probabilistic weighting. After comparing the φη invariant mass spectra for all selection methods, two structures were consistently observed. One of the structures was found to have a mass of (m = 1.657 ± 0.008)GeV/c^2 and a width of (σ = 0.190 ± 0.024)GeV/^2 ; and the second structure was found to have a mass of (m = 1.879 ± 0.004)GeV/c^2 and a width of (σ = 0.042 ± 0.014)GeV/c^2 .

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Physics in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 12, 2019.

**NOTE (Keywords):**GlueX, Jefferson Lab, Nuclear Physics, Photoproduction

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Paul Eugenio, Professor Directing Dissertation; Ettore Aldrovandi, University Representative; Simon Capstick, Committee Member; Horst Wahl, Committee Member; Volker Crede, Committee Member; Alexander Ostrovidov, Committee Member.

**SUBJECT:**Nuclear physics

**DEGREE:**Doctoral

**Record number: 26**

**FILENAME:**Carrico\_fsu\_0071E\_15003.pdf

**TITLE:**Musical Bridges to Inclusive Community: Promoting Neurodiversity Acceptance through Traditional Irish Music in Limerick, Ireland

**AUTHOR:**Carrico, Alexandria H. (Alexandria Heaton)

**MEMBER (Professor Directing Dissertation):**Bakan, Michael B.

**MEMBER (University Representative):**Cripe, Juliann J. Woods, 1952-

**MEMBER (Committee Member):**Eyerly, Sarah

**MEMBER (Committee Member):**Darrow, Alice-Ann

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2018

**PHYSICAL DESCRIPTION:**1 online resource (226 pages)

**ABSTRACT:**This dissertation explores how the participatory and community-based practice of traditional Irish music, or trad, can provide a space for neurodivergent and neurotypical musicians to build relationships that challenge socially constructed notions of difference. Trad is a diverse set of genres that in many ways serves as a representation of Irish culture and heritage. Though multifaceted in its musical expression, at its heart this practice is a communal and participatory tradition. Nowhere is this emphasis on communal musicking more present than in Irish music sessions, informal gatherings that take place mainly in pubs where musicians join together for an evening of music, dance, song, and good craic (fun). While some venues are more exclusive than others, sessions are community events, which welcome all people, regardless of age, musical background, or skill to participate, at least in theory. However, through my experience as a professional singer of traditional Irish music and bodhrán (Irish frame drum) player, I discovered that this culture of inclusivity did not extend to neurodivergent musicians. Though the community-based ethos of trad was conducive to neurodiverse musical engagement, few sessions included neurodivergent musicians, either in the United States or Ireland. In fact, there were no programs dedicated to teaching trad music to neurodivergent individuals, nor were there any outward efforts to involve them in session culture. This lacuna inspired this dissertation project, which provided an opportunity for neurodivergent adults to engage with neurotypical musicians from the community through traditional Irish music. Utilizing the neurodiversity paradigm, which views neurodivergence as a natural form of human diversity manifested through neurological heterogeneity, this project was established with the goal of breaking down stigma associated with disability and promoting neurodiversity acceptance through musical means. This research was conducted over the course of nine months in Limerick, Ireland. There I collaborated with the Brothers of Charity, Ireland’s largest disability service organization, and began my musical partnership with the Roselawn Rovers Return, a group of 14 young adults with a diverse range of neurodivergent identities, including Autism Spectrum Conditions (ASC), Unspecified Neurodevelopmental Disorder (UNDD), and Down Syndrome, the latter of which is often identified within the intersecting category of intellectual disability. The project was divided into two phases: the workshops and the sessions. During the first phase of the project, the Rovers and I held weekly musical workshops in which we learned traditional Irish songs, exercised agency through collaborative musical decision-making, and created opportunities for personal expression through the establishment of individual performances. In the second phase of the project, the Rovers and I joined together with Cruinniú, a group of neurotypical musicians from the Limerick community, to host two collaborative sessions. This dissertation explores this process, chronicling the personal growth demonstrated by the Rovers throughout the workshops and the extent to which the collaborative sessions allowed the Rovers and Cruinníu to bridge neurodiverse-neurotypical gaps and to overturn misconceptions that existed about people with disabilities in Limerick. Central to this dissertation are the thoughts, experiences, and narratives of my collaborators, which are explored throughout the dissertation. To my knowledge, this activist-oriented project is the first of its kind to provide opportunities for neurodivergent musicians to engage in traditional Irish music sessions. As a newly created program, this dissertation contributes to the growing number of applied ethnomusicology projects aimed at addressing social justice issues through on-the-ground initiatives. Due to its success, this project serves as a model for future programs designed to connect diverse communities through participatory music genres; and due to its shortcomings and limitations, it provides an opportunity to critically assess the efficacy of musical ventures designed to bridge the neurotypical-neurodiverse divide.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the College of Music in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2018.

**NOTE (Date of Defense):**March 29, 2018.

**NOTE (Keywords):**Ethnomusicology, Neurodiversity, Social Justice, Traditional Irish Music

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Michael B. Bakan, Professor Directing Dissertation; Juliann Woods, University Representative; Sarah Eyerly, Committee Member; Alice-Ann Darrow, Committee Member.

**SUBJECT:**Music

**DEGREE:**Doctoral

**Record number: 27**

**FILENAME:**Carroll\_fsu\_0071E\_15094.pdf

**TITLE:**An Investigation of a College Freshmen Study Abroad Program: Academic and Intercultural Communication Outcomes

**AUTHOR:**Carroll, Christina P.

**MEMBER (Professor Co-Directing Dissertation):**Schrader, Linda B.

**MEMBER (Professor Co-Directing Dissertation):**Schwartz, Robert A.

**MEMBER (University Representative):**Jakubowski, Elizabeth M.

**MEMBER (Committee Member):**Iatarola, Patrice

**MEMBER (Committee Member):**Park, Toby J.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Education

**CORPORATE NAME:**Department of Educational Leadership and Policy Studies

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (139 pages)

**ABSTRACT:**Participation in study abroad has tripled in the last two decades, with over 332,000 U.S. undergraduate students studying overseas for academic credit in the 2016/2017 school year (Institute of International Education, 2018). Programs aimed at freshman students are a popular new trend in education abroad. As freshman program offerings increase, so does the urgency to assess the merits and effectiveness of these programs. Existing literature illustrates benefits of the study abroad experience in general, but provides little insight on outcomes for freshman students participating in first-year programs. Through a mixed methods approach, this study seeks to investigate academic and intercultural communication program outcomes of a full, first-year study abroad experience for a single freshman cohort. This study will provide institutional stakeholders their first outcomes assessment of a new and increasingly popular type of educational program. Additionally, the study will inform the field of study abroad through a descriptive analysis of participant data and their perceptions. The results have the potential to serve as a foundation for future research and the development of best practices.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Educational Leadership and Policy Studies in partial fulfillment of the requirements for the degree of Doctor of Education.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 11, 2019.

**NOTE (Keywords):**academic outcomes, first year experience, freshmen, learning outcomes, program evaluation, study abroad

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Linda Schrader, Professor Co-Directing Dissertation; Robert A. Schwartz, Professor Co-Directing Dissertation; Elizabeth M. Jakubowski, University Representative; Patrice Iatarola, Committee Member; Toby Park, Committee Member.

**SUBJECT:**Education and state

**SUBJECT:**Educational evaluation

**DEGREE:**Doctoral

**Record number: 28**

**FILENAME:**Carstens\_fsu\_0071N\_15075.pdf

**TITLE:**Tropical Cyclogenesis from Self-Aggregated Convection in Numerical Simulations of Rotating Radiative-Convective Equilibrium

**AUTHOR:**Carstens, Jacob D.

**MEMBER (Professor Directing Thesis):**Wing, Allison A.

**MEMBER (Committee Member):**Hart, Robert E. (Robert Edward), 1972-

**MEMBER (Committee Member):**Chagnon, Jeffrey M.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Earth, Ocean and Atmospheric Science

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (73 pages)

**ABSTRACT:**Organized convection is of critical importance in the tropical atmosphere. Recent advances in numerical modeling have revealed that moist convection can interact with its environment to transition from a quasi-random to organized state. This phenomenon, known as convective self-aggregation, is aided by feedbacks involving clouds, water vapor, and radiation that increase the spatial variance of column-integrated frozen moist static energy. Prior studies have shown self-aggregation to take several different forms, including that of spontaneous tropical cyclogenesis in an environment of rotating radiative-convective equilibrium (RCE). This study expands upon previous work to address the processes leading to tropical cyclogenesis in this rotating RCE framework. More specifically, a 3-D, cloud-resolving numerical model is used to examine the self-aggregation of convection and potential cyclogenesis, and the background planetary vorticity is varied on an f-plane across simulations to represent a range of deep tropical and near-equatorial environments. Convection is initialized randomly in an otherwise homogeneous environment, with no background wind, precursor disturbance, or other synoptic-scale forcing. All simulations with planetary vorticity corresponding to latitudes from 10° to 20° generate intense tropical cyclones, with maximum wind speeds of 80 m/s or above. Time to genesis varies widely, even within a 5-member ensemble of 20° simulations, reflecting a potential degree of stochastic variability based in part on the initial random distribution of convection. Shared across this so-called “high-f” group is the emergence of a midlevel vortex in the days leading to genesis, which has dynamic and thermodynamic implications on its environment that facilitate the spinup of a low-level vortex. Tropical cyclogenesis is possible in this model even at values of Coriolis parameter as low as that representative of 1°. In these experiments, convection self-aggregates into a quasi-circular cluster, which then begins to rotate and gradually strengthen into a tropical storm, aided by near-surface inflow and shallow overturning radial circulations aloft within the aggregated cluster. Other experiments at these lower Coriolis parameters instead self-aggregate into an elongated band and fail to undergo cyclogenesis over the 100-day simulation. A large portion of this study is devoted to examining in greater detail the dynamic and thermodynamic evolution of cyclogenesis in these experiments and comparing the physical mechanisms to current theories.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the Department of Earth, Ocean and Atmospheric Science in partial fulfillment of the requirements for the degree of Master of Science.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 1, 2019.

**NOTE (Keywords):**Convection, Numerical modeling, Self-aggregation, Tropical cyclones

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Allison A. Wing, Professor Directing Thesis; Robert E. Hart, Committee Member; Jeﬀrey M. Chagnon, Committee Member.

**SUBJECT:**Meteorology

**DEGREE:**Masters

**Record number: 29**

**FILENAME:**Cavanah\_fsu\_0071E\_14976.pdf

**TITLE:**Development of Student Skill, Will, and Self-Regulation through Participation in a First-Year Seminar Course

**AUTHOR:**Cavanah, Megan

**MEMBER (Professor Directing Dissertation):**Park, Toby J.

**MEMBER (University Representative):**Jakubowski, Elizabeth M.

**MEMBER (Committee Member):**Iatarola, Patrice

**MEMBER (Committee Member):**Schrader, Linda B.

**MEMBER (Committee Member):**Schwartz, Robert A.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Education

**CORPORATE NAME:**Department of Educational Leadership and Policy Studies

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (87 pages)

**ABSTRACT:**One issue that continues to impact higher education is students entering college without the skills and dispositions necessary for success at the postsecondary level. While instructors and educational leaders and often pay significant attention to addressing students’ lack of the prerequisite content knowledge in mathematics, reading, and writing, students are often also in need of information and skills for strategic learning. With the current emphasis on student retention and completion, institutions are using high-impact interventions, such as first-year seminar courses, to equip students with these attributes early on in their academic careers. This study examined the relationship between participation in a compulsory first-year experience course and students’ skill, will, and self-regulation using regression methods.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Educational Leadership and Policy Studies in partial fulfillment of the requirements for the degree of Doctor of Education.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**January 31, 2019.

**NOTE (Keywords):**first-year experience, first-year seminar, self-regulation, skill, will

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Toby Park, Professor Directing Dissertation; Elizabeth M. Jakubowski, University Representative; Patrice Iatarola, Committee Member; Linda Schrader, Committee Member; Robert A. Schwartz, Committee Member.

**SUBJECT:**Educational leadership

**DEGREE:**Doctoral

**Record number: 30**

**FILENAME:**Chan\_fsu\_0071E\_14985.pdf

**TITLE:**Revenge of the Asian Woman

**AUTHOR:**Chan, Dorothy Ka-Ying

**MEMBER (Professor Co-Directing Dissertation):**Kirby, David, 1944-

**MEMBER (Professor Co-Directing Dissertation):**Hamby, Barbara, 1952-

**MEMBER (University Representative):**Jolles, Adam

**MEMBER (Committee Member):**Moore, Dennis

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of English

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (109 pages)

**ABSTRACT:**“Who doesn’t think kissing is the greatest thing / in the world other than eating?” Revenge of the Asian Woman comes to life on a sexed-up soap opera / B-movie platter where passion and food and fantasy reign supreme: excess in the form of full odes and triple sonnets with towers of macarons and carnival desserts and Hong Kong street food on a skewer—and make it a double. The East Asian girl boss takes her revenge on those who have fetishized her, looking great in gold booty shorts, because “If I played roller derby, my name would be Yellow Fever, / knocking out all those white boys from college / who used to whisper sweet nothings to me // in Mandarin.” She narrates her parents’ love story, the Chinese-American immigrant dream, her Eastern zodiac fate, and her own sexual awakening. Revenge comes to life with scenes that mimic the movies: the speaker’s father as a young boy in Hong Kong running into a circus tent, winning a rice eating contest; young lovers in LA at 3 in the morning; and a forehead that is “too Godzilla, too Tarzan / too Wonder Woman”—scenes of a Chinese-American experience, one in which the female speaker is “ready for takeoff,” while paying homage to her heritage: a grandmother who wants to buy her all the jade and gold in the world, a younger cousin who thinks she’s had a hundred boyfriends, and a grandfather who watches soap operas with her. Revenge of the Asian Woman is really about “it,” whether that “it” is the It girl, the It trend, or the ineffable feeling you have in “LA, 3 AM, the wind in your hair, down to your / breasts, braless under a low-v dress, / stroking the driver who’s your lover.” This collection presents plenty of longing for those fleeting moments, regardless if those moments are the speaker’s first sexual awakening, “Ode to the First Boy Who Made Me Feel It”; the mother recounting her favorite childhood show about a family trying to reunite in “Triple Sonnet for Autoerotica”; or the nostalgia that’s presented with references to '80s teen films starring Andrew McCarthy, Liberace’s reign of Las Vegas, or “an appliance / that would deliver food from any part of the world—any part of the universe” from The Jetsons. And with all this sex and food and longing, Revenge of the Asian Woman is above all, a fun romp. Let’s have a little Liberace-Las-Vegas-fun along the way with the glitz and glamour and kitsch of Japanese love hotels, B-movie starring Asian girls traveling to Mars, and total fantasy fulfillment as our dreams and nightmares come to life. The Asian woman conquers all, having her cake and eating it too— “Oh, cut that cake again.”

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of English in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**January 25, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**David Kirby, Professor Co-Directing Dissertation; Barbara Hamby, Professor Co-Directing Dissertation; Adam Jolles, University Representative; Dennis Moore, Committee Member.

**DEGREE:**Doctoral

**Record number: 31**

**FILENAME:**Chen\_fsu\_0071N\_15237.pdf

**TITLE:**Lignin-Based Biodegradable Aliphatic Polyester

**AUTHOR:**Chen, Siyuan

**MEMBER (Professor Directing Thesis):**Chung, Hoyong

**MEMBER (Committee Member):**Li, Yan

**MEMBER (Committee Member):**Hallinan, Daniel T., Jr.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**FAMU-FSU College of Engineering

**CORPORATE NAME:**Department of Chemical Engineering

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (54 pages)

**ABSTRACT:**Lignin is the second most abundant biopolymers and the most sufficient aromatic renewable resource. Because the lignin is biomass (plant)-based, it is intrinsically biodegradable. In the thesis, the biomass-based lignin was covalently linked to another biodegradable polyester, poly(ethylene brassylate) (PEB) which is originated from castor oil. In addition to the biodegradability, lignin used as a hard-segmental component that can provide strong mechanical property of the finally prepared product. The integration of hard lignin and soft PEB controls mechanical properties by changing the ratio between two segments, lignin and PEB. The new lignin-PEB material is synthesized by following three steps: 1) Lignin was chemically functionalized to convert hydroxyl group to carboxylic acid groups by steglich esterification of succinic acid, 2) the PEB was synthesized from ethylene brassylate by strong guanidine base catalyzed ring-opening polymerization. The synthesized linear PEB contains hydroxyl end groups on both terminals. 3) The lignin-based aliphatic polyester was produced by the polycondensation of PEB and carboxylic acid functionalized lignin. The polycondensation is done by using the commonly used industrial catalyst, antimony oxide (Sb2O3) for PET synthesis. Based upon the newly developed synthetic method of lignin-PEB copolymer, the new biodegradable polymer will be used as an alternative clam-nets material in the future.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Thesis submitted to the Department of Chemical Engineering in partial fulfillment of the requirements for the degree of Master of Science.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 17, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Hoyong Chung, Professor Directing Thesis; Yan Li, Committee Member; Daniel Hallinan, Jr., Committee Member.

**SUBJECT:**Chemical engineering

**DEGREE:**Masters

**Record number: 32**

**FILENAME:**Chien\_fsu\_0071E\_14993.pdf

**TITLE:**Solid-State NMR and MRI Studies of Structure-Property Correlations in Fast Li/Na-Ion Conductors

**AUTHOR:**Chien, Po-Hsiu

**MEMBER (Professor Directing Dissertation):**Hu, Yan-yan

**MEMBER (University Representative):**Siegrist, Theo

**MEMBER (Committee Member):**Shatruk, Mykhailo

**MEMBER (Committee Member):**Latturner, Susan

**MEMBER (Committee Member):**Gan, Zhehong

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Chemistry and Biochemistry

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (226 pages)

**ABSTRACT:**This doctoral thesis encompasses wide expanses of studies, which aim to advance the understanding of structure-property relationships in fast ion conductors (FICs) with a variety of characterization tools. In particular, powder X-ray diffraction (PXRD), electrochemical impedance spectroscopy (EIS), solid-state nuclear magnetic resonance (NMR), and magnetic resonance imaging (MRI) are jointly utilized to gain multidimensional knowledge. Two classes of FICs are examined and they are crystalline (Na x Sr 1−x SiO 3−0.5x , Li 7 La 3 Zr 2 O 12 , and Li 10 GeP 2 S 12 ) and glass-ceramic (Na 3−y PS 4−x Cl x and Li 10 P 3 S 12 I) materials. In regard to properties, we focus on ionic conductivity, chemical phase compositions, lithium distribution, and local chemical environments. In this thesis, the structure-property relationships are explored from two aspects: fundamental and practical. Fundamentally, we firstly establish the correlation of chemical phase evolution with ionic conductivity in Na x Sr 1−x SiO 3−0.5x and prove that the origin of conductivity is from Na + motions rather than O 2− . Then, it is found that the ionic conductivity can be improved by careful control of synthesis conditions. The improvement, on one hand, springs from the enhancement of functional defect site, which is associated with the creation of P 4+ in PS 4 3− tetrahedra in Na 3−y PS 4−x Cl x . On the other hand, the promotion of higher ionic conductivity is gained in Li 10 P 3 S 12 I by yielding high content of glassy phase with low activation energy at low temperature. Practically, we are attracted to the development of promising FICs and the chemical stability of FICs against polarizations in solid-state batteries cells. Propelled by the desire, we start with the laser-assisted magic-angle-spinning (LASMAS) probe to monitor phase evolution and ion dynamics in situ during materials synthesis. Model test on Li 7 La 3 Zr 2 O 12 identifies a compositionally similar phase, which also has comparable ion dynamics as verified by sequential T 1 measurements. Lastly, we use MRI to track the Li distribution in the bulk Li 7 La 3 Zr 2 O 12 and Li 10 GeP 2 S 12 , and at the electrolyte−Li interfaces under pristine, cycled, and short-circuit conditions. Different polarizations of Li concentration have witnessed different failing mechanisms in these two materials. Multinuclear ( 6,7 Li, 17 O, 23 Na, 29 Si, 31 P, and 127 I) solid-state NMR and advanced acquisition techniques are adapted to help with the assignment of local chemical environments.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Chemistry and Biochemistry in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 26, 2019.

**NOTE (Keywords):**MRI, Solid electrolyte, Solid-state NMR

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Yan-Yan Hu, Professor Directing Dissertation; Theo M. Siegrist, University Representative; Michael Shatruk, Committee Member; Susan Latturner, Committee Member; Zhehong Gan, Committee Member.

**SUBJECT:**Materials science

**SUBJECT:**Chemistry

**DEGREE:**Doctoral

**Record number: 33**

**FILENAME:**Childs\_fsu\_0071E\_15184.pdf

**TITLE:**A Pedagogical Study of the Saxophone through the Lens of Acoustic Niche Hypothesis

**AUTHOR:**Childs, Nicholas James

**MEMBER (Professor Directing Treatise):**Deibel, Geoffrey

**MEMBER (Committee Member):**Bish, Deborah, 1971-

**MEMBER (Committee Member):**Keesecker, Jeff

**MEMBER (University Representative):**Von Glahn, Denise, 1950-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (78 pages)

**ABSTRACT:**The purpose of this document is to construct a pedagogical model for which we can better teach the adaptation and versatility of the saxophone within the musical world. In my experience, there seems to be an absence of discussion regarding the rich historical diversity of the instrument. When considering the development of the saxophone it is usually within the scope of a particular musical style, most often through the genres of classical music or jazz. By narrowing our scope to the field that we inhabit we leave out some of the most innovative and interesting approaches to the instrument, and concepts that could potentially be integrated into our own performance practices. Through an examination of how the instrument has adapted in response to technological, social and aesthetic changes we gain insight into the flexibility of the instrument and begin to dismantle barriers that often define “schools of playing.” By establishing the saxophone’s history of adaptation, I build an argument that there is no singular correct approach to sound, only a rich variety of choices. Soundscape ecologist Bernard Krause popularized the term “acoustic niche” which originated from his colleague Ruth Happel. Acoustic niche refers to the situation by which vocalizing creatures within a particular environment alter their frequencies to compensate for sonic changes to their territory caused by encroaching other species including humans. He states that examining, “the diversity and structure of natural sounds from a rainforest forcefully demonstrates very special relationships of many insects, birds, mammals, and amphibians to each other.” The adaptation of creatures’ vocalizations, rising and falling within certain frequency levels, is essential to their survival. Any “masking” or invasion by others threatens an individual’s ability to locate food sources, communicate danger signals and attract mates. In this context, acoustic niche theory becomes a useful metaphor for the development, adaptation, and trajectories of the saxophone in the instrumental world. Since its invention in the mid-nineteenth century, the saxophone has regularly adapted and altered its tonal profile to carve a place in a diverse spectrum of genres and musical styles. The opening chapter discusses the landscape of the saxophone community as a whole. This includes the genres of classical and jazz as well as niche communities such as Carnatic and popular musics. In this chapter I frame the issue of “specialization” and provide background material on acoustic niche theory. The second chapter seeks to complicate and enrich the saxophone’s historical narrative in order to demonstrate the logic of various communities existing within. The third chapter begins with a discussion of technological changes made to the instrument since its invention. The remainder of chapter three explores a variety of diverse tonal profiles that exist within general communities such as classical, jazz, popular and non-Western musics. The final chapter considers a practical application of these discussions and presents a sample pedagogical method.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Treatise submitted to the College of Music in partial fulfillment of the requirements for the degree of Doctor of Music.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 19, 2019.

**NOTE (Keywords):**Acoustic Niche, Historical Narrative, Pedagogy, Saxophone, Specialization, Tonal Profile

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Geoffrey Deibel, Professor Directing Treatise; Denise Von Glahn, University Representative; Deborah Bish, Committee Member; Jeffrey Keesecker, Committee Member.

**SUBJECT:**Education--Study and teaching

**SUBJECT:**Music

**SUBJECT:**Music--Instruction and study

**DEGREE:**Doctoral

**Record number: 34**

**FILENAME:**Cicchino\_fsu\_0071E\_15117.pdf

**TITLE:**Notes Toward a Panoramic View: A National Portrait of GTA Writing Pedagogy Education across Doctoral Programs in Rhetoric and Composition

**AUTHOR:**Cicchino, Amy Teresa

**MEMBER (Professor Directing Dissertation):**Yancey, Kathleen Blake, 1950-

**MEMBER (University Representative):**Dennen, Vanessa P., 1970-

**MEMBER (Committee Member):**Neal, Michael R.

**MEMBER (Committee Member):**Fleckenstein, Kristie S.

**MEMBER (Committee Member):**Coxwell-Teague, Deborah

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of English

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (256 pages)

**ABSTRACT:**The preparation of graduate teaching assistants (GTAs) for the college composition classroom has been a conversation in writing program administration scholarship for the last century. In that time, national position statements have been written articulating best practices for the design of these preparation programs in addition to the countless number of articles, chapters, and books taking up this topic. However, a large-scale study of these preparation programs has not been conducted for twenty years. In seeking to update the field’s knowledge of large-scale GTA writing pedagogy education (WPE) preparation, this dissertation describes how doctoral programs across the nation prepare their GTA instructors to enter the undergraduate composition classroom. The study employs a mixed-methods approach to describe GTA education and professionalization across institutions granting doctoral degrees in Rhetoric and Composition and includes a national survey along with three local case studies. The findings for this dissertation include the following: 1) WPE must often balance multiple purposes including the development of local, pedagogical, and theoretical knowledges, 2) WPAs employ a variety of strategies to manage those purposes such as blending, loading, and embedding, 3) The greatest constraint in designing and delivering WPE, as identified by this study’s respondents, is time, 4) The design of WPE is highly local in that it is deeply impacted by programmatic and administrative histories, local constraints, and the population who deliver and receive WPE.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of English in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 15, 2019.

**NOTE (Keywords):**composition, GTA education, GTA preparation, writing pedagogy education, writing program administration

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Kathleen Blake Yancey, Professor Directing Dissertation; Vanessa Paz Dennen, University Representative; Michael Neal, Committee Member; Kristie S. Fleckenstein, Committee Member; Deborah Coxwell-Teague, Committee Member.

**SUBJECT:**British literature

**SUBJECT:**Irish literature

**SUBJECT:**English literature

**SUBJECT:**Rhetoric

**DEGREE:**Doctoral

**Record number: 35**

**FILENAME:**Clapper\_fsu\_0071N\_15048.pdf

**TITLE:**The Case of "Big M" Musicology at Florida State University: A Historical and Ethnographic Study

**AUTHOR:**Clapper, Laura M.

**MEMBER (Professor Directing Thesis):**Eyerly, Sarah

**MEMBER (Committee Member):**Seaton, Douglass

**MEMBER (Committee Member):**Gunderson, Frank D.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (117 pages)

**ABSTRACT:**The Florida State University musicology program comprises a community of like-minded individuals in both the faculty member and student cohorts. The umbrella concept of “Big M” Musicology is valued and central to creating identity and cohesion among FSU’s musicology community members. This thesis serves to understand the FSU musicology program’s history and how community members understand, define, and embody “Big M” Musicology based on their lived experiences in the program. This thesis examines FSU’s musicology program through historical and ethnographic study. I first provide an institutional history of Florida State University’s musicology program by examining the institutional structures, administrative involvement, and the influence of faculty member research areas and relationships on the program’s development. I recount how the ideal of “Big M” Musicology was born out of the FSU School of Music’s desire for comprehensive programming through the establishment of an ethnomusicology program, the implementation of a terminal degree in musicology, and an emphasis on applied musicology and performance. I also argue that the collegiality among faculty members contributed to the program’s growth and to the musicology department’s shared “Big M” vision. In the subsequent chapters of this thesis, I analyze survey data that I collected from current students, alumni, and current and former faculty members affiliated with the program from the years 1988–2018 to understand individual community members’ experiences of “Big M” Musicology. First, I synthesize the definitions of “Big M” provided by FSU musicology affiliates, and I explore their perspectives on how this philosophy manifests in FSU’s program. I then analyze individual community members’ experiences in the program in order to reconcile the policy of “Big M” with its implementation and practice. I conclude by placing “Big M” Musicology in the context of contemporary trends in the field to demonstrate how the inclusivity inherent in this ideal might foreshadow a future path for musicology and its subdisciplines.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the College of Music in partial fulfillment of the requirements for the degree of Master of Music.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 1, 2019.

**NOTE (Keywords):**Institutional Ethnography, Institutional History, Musicology

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Sarah Eyerly, Professor Directing Thesis; Douglass Seaton, Committee Member; Frank Gunderson, Committee Member.

**SUBJECT:**Music

**DEGREE:**Masters

**Record number: 36**

**FILENAME:**Clarke\_fsu\_0071N\_15206.pdf

**TITLE:**Soy Morena: Identity Performance on Black Twitter

**AUTHOR:**Clarke, Liana Esperanza

**MEMBER (Professor Directing Thesis):**Lathan, Rhea Estelle, 1961-

**MEMBER (Committee Member):**Fleckenstein, Kristie S.

**MEMBER (Committee Member):**Gaines, Alisha

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of English

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (90 pages)

**ABSTRACT:**Soy Morena: Identity Performance on Black Twitter analyzes how people of color utilize the social media platform Twitter to perform their cultural and racial identities. Through the use of critical race theory, digital rhetoric, and cultural rhetoric, this project looks at tweets from the author’s personal Twitter account, noting the ways her hybridity has come to the forefront of her identity on that space. This project also weaves the author’s personal narrative throughout in an effort to claim her story and highlight how nuanced identity truly is.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the Department of English in partial fulfillment of the requirements for the degree of Master of Arts.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 15, 2019.

**NOTE (Keywords):**Black Twitter, identity, intersectionality, language, race

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Rhea Lathan, Professor Directing Thesis; Kristie S. Fleckenstein, Committee Member; Alisha Gaines, Committee Member.

**SUBJECT:**Rhetoric

**DEGREE:**Masters

**Record number: 37**

**FILENAME:**CollantesGoicochea\_fsu\_0071E\_14910.pdf

**TITLE:**Understanding Why Grain Boundaries Limit the Critical Current Density of Fe-Based Superconductors and Exploring Ways to Increase Current Density

**AUTHOR:**Collantes Goicochea, Yesusa Kimberlim

**MEMBER (Professor Directing Dissertation):**Hellstrom, Eric

**MEMBER (University Representative):**Humayun, Munir

**MEMBER (Committee Member):**Larbalestier, D. (David)

**MEMBER (Committee Member):**Siegrist, Theo

**MEMBER (Committee Member):**Hanson, Kenneth G.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**Graduate School

**CORPORATE NAME:**Program in Material Science and Engineering

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2018

**PHYSICAL DESCRIPTION:**1 online resource (161 pages)

**ABSTRACT:**The main application of superconducting materials is to generate very high magnetic fields in reduced spaces i.e. built strong magnets (16 T – 100 T) for diverse applications such as nuclear magnetic resonance (NMR), magnetic resonance imaging (MRI), and particle accelerators. Since their discovery in 2008, Fe-based superconductors (FBS) have drawn attention from the technological point of view due to the interesting combination of properties that these materials possess for potential high field magnet applications. Also from the scientific community because superconductivity is a property of Fe-As layers in these compounds, yet magnetism in Fe has long been assumed to destroy superconductivity. Although, FBS have been extensively studied, it was not until 2012 that Weiss et al. demonstrated the potential of FBS for practical applications, reporting a surprisingly high critical current density (Jc) of 104 Acm-2 at 10T in untextured polycrystals. This result is considered a breakthrough because previous studies in cobalt-doped (Co-doped) BaFe2As2 bicrystals suggested that, similarly to YBa2Cu3O7-δ (YBCO), high-angle grain boundaries block supercurrent. That fact indicated that FBS would need to be textured like YBCO coated conductors in order to carry significant Jc for practical applications. YBCO coated conductors are state of the art materials for high field magnet applications. However, due to texturing the manufacturing of these materials is still very expensive ($100/Km of flat wire) reducing their usage to a small niche of applications. The unexpected high intergrain Jc was measured in potassium-doped BaFe2As2 (K-doped Ba-122) untextured round wires; the round geometry is preferred by far by magnet builders and eliminates the costs of expensive substrates needed for texturing. The high Jc in K-doped Ba-122 was associated with its having a fine grain size. However, even with the surprisingly high Jc, current transport across grain boundaries is still about a factor of 10 too low for practical applications. The main goals of this research were to understand what blocks current at grain boundaries of Ba-122, and to develop methods to increase current transport across grain boundaries to obtain a polycrystalline conductor that is closer to the application limit 105 Acm-2 at 10 T. This was done: 1) By investigating what type of impurities and other extrinsic factors are blocking Jc of Ba-122 samples; 2) By developing new protocols for cleaner synthesis process to continue raising Jc in Ba-122 compounds; 3) By studying effects of grain size on Jc; 4) By studying how different doping schemes change the electromagnetic properties of Ba-122 polycrystals. The significance of this research was to explore new ways to increase Jc in untextured Ba-122 polycrystals. I studied the impact that careful processing and chemical doping have on the microstructural, nano-structural, and superconducting properties of untextured polycrystals of Ba-122. The aim was to produce materials with clean and well connected grain boundaries that allow effective current flow. One of my contributions was to synthesize samples using the low temperature processing developed in Weiss’s study, but focusing on the elimination of oxygen and moisture absorption during synthesis to avoid oxides and hydroxides formation along the grain boundaries that blocks supercurrent. Also, I optimized the previous processing to produce even finer grain samples to raise Jc at low fields by modifying the milling process and heat treatment of the samples. Another contribution was the study of novel dopant combinations such as double doping different sites to investigate how doping alters Jc within grains and across grain boundaries in Ba-122. K-doped Ba-122 combines a very high upper critical field (> 100 T), a low anisotropy, and high intragranular Jc. And because we have shown that intergranular Jc is high in an untextured polycrystal that can be formed into a round wire, this technology could potentially displace the highly-textured YBCO coated conductors for high-field NMR magnets at 4.2 K. Coated conductors are currently considered the state of the art technology for these applications.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Program in Material Science and Engineering in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Fall Semester 2018.

**NOTE (Date of Defense):**November 9, 2018.

**NOTE (Keywords):**Ba-122, Bulk superconductors, critical current density, grain boundaries, Superconductivity, TEM

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Eric Hellstrom, Professor Directing Dissertation; Munir Humayun, University Representative; David Larbalestier, Committee Member; Theo Siegrist, Committee Member; Kenneth G. Hanson, Committee Member.

**SUBJECT:**Materials science

**DEGREE:**Doctoral

**Record number: 38**

**FILENAME:**CordovaGuillen\_fsu\_0071E\_12807.pdf

**TITLE:**Shape Data Analysis for Machine Learning in Power Systems Applications

**AUTHOR:**Cordova Guillen, Jose David

**MEMBER (Professor Directing Dissertation):**Pamidi, Sastry V.

**MEMBER (University Representative):**Srivastava, Anuj, 1968-

**MEMBER (Committee Member):**Ozguven, Eren Erman

**MEMBER (Committee Member):**Li, Hui, 1970-

**MEMBER (Committee Member):**Foo, Simon Y.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**FAMU-FSU College of Engineering

**CORPORATE NAME:**Department of Electrical and Computer Engineering

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (92 pages)

**ABSTRACT:**This dissertation proposes the use of the shape of data as a new feature to improve and develop new in machine learning and deep learning algorithms utilized for different power systems applications. The new features are obtained through Shape Data Analysis (SDA), an emerging field in Statistics. SDA is used to obtain the shape of the data structure to observe different patterns developed under distribution networks abnormal conditions, as well as determining the shape of load curves to improve existing electrical load forecasting algorithms. Specifically, shape-based data analysis is implemented and developed for two different applications: electrical fault detection and electrical consumption short-term load forecasting. The algorithms proposed are implemented on data collected from Intelligent Electronic Devices (IEDs), Phasor Measurement Units (PMUs), and Supervisory Control and Data Acquisition (SCADA) systems in power distribution networks.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Electrical and Computer Engineering in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**February 4, 2019.

**NOTE (Keywords):**Deep Learning, Fault Detection, Load Forecasting, Machine Learning, Shape Data Analysis

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Sastry Pamidi, Professor Directing Dissertation; Anuj Srivastava, University Representative; Eren Ozguven, Committee Member; Hui Li, Committee Member; Simon Foo, Committee Member.

**SUBJECT:**Electrical engineering

**DEGREE:**Doctoral

**Record number: 39**

**FILENAME:**Currie\_fsu\_0071E\_14996.pdf

**TITLE:**The Nature of Fear in Senecan Philosophy and Tragedy

**AUTHOR:**Currie, Michelle Lynn

**MEMBER (Professor Directing Dissertation):**Stover, Tim

**MEMBER (University Representative):**Fumo, Jamie Claire, 1976-

**MEMBER (Committee Member):**Fulkerson, Laurel, 1972-

**MEMBER (Committee Member):**Weiberg, Erika, 1971-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Classics

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (221 pages)

**ABSTRACT:**This dissertation explores the nature and significance of fear in the works of Seneca the Younger. While a variety of emotions have already been examined within the writings of this author, fear remains largely neglected despite its prevalence and fundamental nature. This study contributes to work being done on themes shared across Seneca’s entire literary output, on the relevance of Stoicism to Seneca’s tragedies, and on emotions in the ancient world, especially within the writings of this extremely pertinent author. The project begins with the compilation of a theoretical De metu, based loosely on Seneca’s De ira, to show that a detailed understanding of Seneca’s conception of fear can be gleaned through careful analysis of material from across his corpus. Drawing on the over 1,200 references to fear from throughout Seneca’s corpus, this De metu lays out Seneca’s definition of fear and the causes, effects, and potential therapies he envisions for it. A De metu also allows for a closer comparison of anger and fear, two emotions that Seneca views as similar in both nature and in intensity. This fuller understanding of fear can then be applied to Seneca’s tragedies to see how his ideas of fear are transformed by the tragedic medium. The rest of the project deals with fear within the tragedies on both thematic and narrative levels. The first of these chapters argues that the nature of fear as presented in Seneca’s philosophical works has been adapted for thematic use within various elements of the tragedies. At some points the tragedies reflect his philosophical thinking, reinforcing the philosopher’s understanding of the emotion. More often, however, fear’s nature is distorted or embellished for literary effect, derailing the audience’s expectations of how this emotion functions. Seneca is willing to exceed or vary the nature of fear established in his philosophical works in order to create stronger dramatic effects and follow the conventions of this other genre. Some of the broader thematic uses of fear considered include how fear is used to create suspense, spectacle, and characterization; the use of therapy to combat fear; and what the common sources of fear are, with special focus on the fear of death and the afterlife. Evidence for these thematic uses of fear is drawn from all of Seneca’s tragedies, revealing the widespread relevance of this emotion. The final chapter argues that fear plays a significant role in shaping the situations of several main figures of Seneca’s plays; without a full understanding of fear, the nuance of Seneca’s commentary on these characters’ flaws, misfortunes, and ruling styles is incomplete. The presence of fear in Oedipus has already been noted in scholarship, yet a better understanding of Seneca’s ideal therapies for fear and the dangers fear poses shed more light on this play. In Thyestes, special attention must be paid to the emotions of Atreus and Thyestes: each brother experiences both fear and its related passion anger, and alternate between the two over the course of their plotting. Finally, Troades offers further insight into Seneca’s understanding of the relationship of fear and hope. Andromache and Hecuba endure similar circumstances, but while Hecuba experiences merely resignation, the survival of Andromache’s son drives her to hope and thus also to fear. Fear therefore plays a key role in the development of each of these plays. Ultimately, it is possible to determine not only how Seneca defines the nature of fear, but also to what extent and in what ways fear in the tragedies draws upon Seneca’s philosophy. Fear provides Seneca with a vital tool for creating successful and meaningful tragedies.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Classics in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 12, 2019.

**NOTE (Keywords):**emotions, fear, Seneca, Stoicism, tragedy

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Tim Stover, Professor Directing Dissertation; Jamie Fumo, University Representative; Laurel Fulkerson, Committee Member; Erika Weiberg, Committee Member.

**SUBJECT:**Classical literature

**SUBJECT:**Civilization, Greco-Roman

**DEGREE:**Doctoral

**Record number: 40**

**FILENAME:**Cusick\_fsu\_0071E\_15096.pdf

**TITLE:**Proximate Mechanisms Influencing Individual Variation in Cooperative Behavior

**AUTHOR:**Cusick, Jessica Ashley

**MEMBER (Professor Directing Dissertation):**DuVal, Emily H.

**MEMBER (University Representative):**Hull, Elaine M.

**MEMBER (Committee Member):**Travis, Joseph, 1953-

**MEMBER (Committee Member):**Miller, Thomas E., (Professor of Biological Science)

**MEMBER (Committee Member):**Burgess, Scott C

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Biological Science

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (138 pages)

**ABSTRACT:**Cooperation is a complex behavior in which individuals act in ways that increase the fitness of others, at some cost to themselves. In cooperatively breeding vertebrates, helpers capable of reproducing forgo their own reproduction to assist raising offspring produced by breeders. Cooperative breeding in many species is facultative. In such cases, breeders within a single population differ in whether they are assisted by helpers, and potential helpers differ in whether they join a group and provide alloparental care. A major challenge in the study of cooperative breeding behavior is understanding why individuals differ in their cooperative tendency and their contributions to cooperative activities. The ultimate causes of variation in cooperative breeding behavior are increasingly well understood. Our understanding of the underlying physiological mechanisms and behaviors associated with individual differences in cooperative tendency remains poorly studied. In order to understand why cooperative behavior varies within a population, it is necessary to consider the proximate mechanisms associated with variation in cooperative breeding behavior from both the breeders’ and potential helpers’ perspectives. I investigated proximate mechanisms underlying individual variation in cooperative breeding behavior in a wild, color-marked population of facultative, cooperatively breeding brown-headed nuthatches (Sitta pusilla). The study population was located in north Florida at Tall Timbers Research Station. In this population, cooperation varies among breeders and helpers. Approximately 30% of breeding pairs are assisted by at least one second-year, male helper. Second year males also vary in their cooperative tendency, some males become helpers, others attempt to breed independently, and some do not associate with a social group. From 2013-2018, I used observations and experiments to investigate (1) how helpers contribute to breeders’ reproductive effort and how breeders alter their own investment when assisted by a helper, (2) how breeders’ prior nesting success and cooperative status affect subsequent helper recruitment, (3) how potential helpers’ early life physiological mechanisms influence individual variation in cooperation, and (4) how variation in aggressive behavior among breeders influences variation in cooperative behavior. Breeders assisted by helpers did not reduce their investment in offspring production or care, and as a result, nestlings raised by cooperative groups received more food, weighed more, and were more likely to fledge compared to nestlings raised by just the breeding pair. Variation in cooperation among breeders was not explained by differences in breeders’ prior nesting success or cooperative status. Eight-three percent of breeders that recruited helpers had fledged offspring the previous breeding season, yet 56% of unassisted breeders had also fledged young the previous year. These data suggest fledging young is neither necessary nor sufficient in explaining variation in cooperative behavior among breeders. Furthermore, variation in aggressive behavior was unrelated to variation in helper recruitment among breeders. Breeders’ aggressive behavior in response to a heterospecific competitor model was unrelated to breeders’ current cooperative status, and did not predict future recruitment of helpers. These data suggest that, while we thought that aggression and cooperation would represent a behavioral conflict, they do not. Variation in cooperation behavior among potential helpers was related to variation in hormone concentrations, and not variation in relatedness among group members. For potential helpers, variation in nestling corticosterone (the primary stress hormone in birds), not relatedness, predicted which individuals became helpers. Nestlings with lower levels of stress-induced corticosterone were more likely to become helpers, but were not significantly more related to the breeding male compared to their non-helping siblings. My dissertation research investigated proximate mechanisms that influence individual variation in the decision to cooperate, a relatively unexplored aspect of cooperative breeding behavior. This study is one of the first to document a link between glucocorticoids and future helping, and demonstrates that variation in the expression of cooperative behavior may be due to individual differences in underlying physiological mechanisms and behaviors, not relatedness alone. This research contributes to our understanding of variation in cooperative behavior and cooperation among unrelated individuals.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Biological Science in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 15, 2019.

**NOTE (Keywords):**cooperation, cooperative breeding, corticosterone, individual variation, proximate mechanisms, relatedness

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Emily H. DuVal, Professor Directing Dissertation; Elaine Hull, University Representative; Joseph Travis, Committee Member; Thomas E. (Tom) Miller, Committee Member; Scott Burgess, Committee Member.

**SUBJECT:**Biology

**SUBJECT:**Zoology

**DEGREE:**Doctoral

**Record number: 41**

**FILENAME:**Daniels\_fsu\_0071E\_15067.pdf

**TITLE:**Racial, Ethnic and Gender Diversity on Boards of Directors: Implications for Profitability and Analyst Recommendations

**AUTHOR:**Daniels, Inger M.

**MEMBER (Professor Directing Dissertation):**Cheng, Yingmei

**MEMBER (University Representative):**Padavic, Irene

**MEMBER (Committee Member):**Liu, Baixiao

**MEMBER (Committee Member):**Hutton, Irena

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Business

**CORPORATE NAME:**Department of Finance

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (109 pages)

**ABSTRACT:**We examine the relationship between the share of ‘non-traditional’ members, such as African-Americans and women, present on a firm’s board of directors and firm value. We also explore the implications of the presence of non-traditional directors and sell-side analyst stock recommendations. Using data collected from Institutional Shareholder Services (ISS), publications such as Black Enterprise Magazine, the US Census, and internet searches, we assign ethnicities to board members of S&P 1,500 firms during 1996-2016. We find a convex relationship between the share of non-traditional directors and firm value: the share of non-traditional directors is negatively related to firm value at “token” levels of participation (no more than 15%); as the share of non-traditional directors moves beyond 25%, the total impact of non-traditional directors on firm value begins to turn positive. To address endogeneity concerns, we use the Sarbanes-Oxley Act and the Supreme Court 2003 Affirmative Action decision (Grutter v. Bollinger) as exogenous shocks to the supply and demand of non-traditional directors. Furthermore, we find non-traditional directors are more effective board members post-2003: their reduced board memberships, improved attendance record, and increased committee services may explain the enhanced impact of non-traditional directors on firm value after 2003. In a separate analysis, we find that firms with non-traditional board members are associated with lower analyst recommendations and a lower percentage of “buy” ratings on its stock. To address endogeneity concerns, we use an instrumental variable related to a firm’s board connectedness to non-traditional members on outside boards, and a diff-in-diff analysis of the addition of non-traditional directors to a firm’s board. We interpret our findings to suggest bias may exist in analyst recommendations associated with racial and gender diversity on boards of directors.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Finance in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 10, 2019.

**NOTE (Keywords):**Analysts, Board of Directors, Diversity, Firm Value

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Yingmei Cheng, Professor Directing Dissertation; Irene Padavic, University Representative; Baixiao Liu, Committee Member; Irena Hutton, Committee Member.

**SUBJECT:**Finance

**DEGREE:**Doctoral

**Record number: 42**

**FILENAME:**Danuff\_fsu\_0071E\_15030.pdf

**TITLE:**An Investigation into College Mathematics in a Florida State College Pre-and Post-Optional Developmental Education Legislation

**AUTHOR:**Danuff, Allan G.

**MEMBER (Professor Directing Dissertation):**Park, Toby J.

**MEMBER (University Representative):**Jakubowski, Elizabeth M.

**MEMBER (Committee Member):**Hu, Shouping

**MEMBER (Committee Member):**Rutledge, Stacey A.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Education

**CORPORATE NAME:**Department of Educational Leadership and Policy Studies

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (131 pages)

**ABSTRACT:**The Florida Legislature passed a bill that changed the placement methods for some incoming students to the Florida State College System in 2013. This analysis of state policy looks at Senate Bill 1720 as the treatment in an interrupted time-series trend study at one state college in Florida. This research attempts to answer three questions: (1) What is the enrollment trend over the last 10 years in first-level math courses, such as Intermediate Algebra (MAT1033), Liberal Arts Math (MGF1106), and Elementary Statistics (STA2023) for first time in college (FTIC) students? (2) What is the trend of course passing rates in the above listed gateway math courses before and after the developmental education requirements changed? (3) What are the trends in student success rates before and after the changes to developmental education requirements in these courses for various demographics, such as race, age, and gender, for FTIC students in these math courses? This study looked at one college’s gateway math sequence in terms of enrollment and student success. The observed benefits to this institution were the gains in FTIC student enrollment in the gateway math courses. There were observed decreases in FTIC passing rates in the three gateway math courses, yet the total share of FTIC students taking and passing gateway math courses increased. This study should be shared with the Mathematics Department with the hope that it will continue to track student success in its courses and investigate other research in the area of gateway math instruction for younger post-secondary students as their enrollment continues to follow a decrease in the average student’s age.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Educational Leadership and Policy Studies in partial fulfillment of the requirements for the degree of Doctor of Education.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 1, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Toby Park, Professor Directing Dissertation; Elizabeth M. Jakubowski, University Representative; Shouping Hu, Committee Member; Stacey Rutledge, Committee Member.

**SUBJECT:**Mathematics--Study and teaching

**SUBJECT:**Education, Higher

**DEGREE:**Doctoral

**Record number: 43**

**FILENAME:**Davidson\_fsu\_0071E\_15248.pdf

**TITLE:**What Is Gained from Participation in a Research Experience for Teachers Program?: Examining Teachers' Experiences of Science through Three Conceptual Lenses

**AUTHOR:**Davidson, Shannon Gooden

**MEMBER (Professor Co-Directing Dissertation):**Southerland, Sherry A., 1962-

**MEMBER (Professor Co-Directing Dissertation):**Jaber, Lama

**MEMBER (University Representative):**Harper, Kristine

**MEMBER (Committee Member):**Hughes, Roxanne M. (Roxanne Marie)

**MEMBER (Committee Member):**Whitacre, Ian Michael

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Education

**CORPORATE NAME:**School of Teacher Education

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (141 pages)

**ABSTRACT:**Current visions for science education in the United States highlight the notion that students should be afforded opportunities to participate in science learning in ways that mirror the discursive norms, practices, and epistemic orientations of scientists. In this way, K-12 teachers hold a complex responsibility to develop and implement instructional practices that will highlight both the content of science and the culture of science in meaningful ways that will engender student learning. In order to align with this vision of science learning and teaching, teachers should have a grasp of the discipline. That is, along with conceptual knowledge, teachers must also—for example—understand the norms, goals, and values of the scientific community, have knowledge of and skill with the practices of science, recognize the epistemic dimensions of science, and understand that science exists in a cultural and sociopolitical context. Yet, it is difficult to expect science teachers to know how to bring such nuanced aspects of the discipline of science into their instructional practice if they themselves have had little to no experience with the community of science and its disciplinary underpinnings. This stands particularly true for elementary teachers who are often less well prepared and equipped to teach science than their secondary counterparts. With this in mind, professional development programs such as Research Experience for Teachers (RET) have been considered to be one venue wherein teachers—elementary and secondary alike—can participate in science research through immersive and collaborative work with scientists over an extended period of time. While RET programs differ widely in their research focus, science discipline, time span, programmatic structure, and so forth, the goal of all RET programs is to support teachers in their understanding of science so that they may bring this learning back to their classroom, and in turn, influence their science teaching for the purpose of increased student learning. While RETs are largely recognized as productive experiences for teachers, there is little understood about the occurrences within RET that can make them lastingly impactful and important to teachers. The research presented in this dissertation begins to address this gap in the research by examining teachers’ participation in RET from the view of three distinct conceptual lenses: that of communities of practice, of epistemic affect, and of critical events, respectively. The first paper examines how K-12 teachers make sense of the discipline of science through the concept of ‘communities of practice’ and considers how teachers’ experiences of science research differ from those experiences of novice and practicing scientists entering the field. From interview data from RET participants, the findings are drawn upon to put forth a conceptual framework that can guide future research on the unique experiences of teachers through RET participation. The second paper aims to consider how elementary teachers’ participation within a science research community fosters their epistemic affect in ways that may shape and inform their instruction in future classroom practice. From interviews and in-depth observations, the paper considers the ways in which teachers in RET may experience emotions and feelings similar to scientists as they conduct research work and construct knowledge. The third and final paper in this collection draws on the lens of critical events to examine the experiences of one elementary teacher as she reflects on her own understanding of the discipline of science in light of specific events occurring during her RET participation. From interviews occurring more than three months after Ava’s participation in scientific research at RET, three events were identified as ‘critical’ because of their particular salience and import to her disciplinary understandings of science. The paper delineates shifts in the ways Ava came to view science, scientists, and the community of science as a result of her RET participation and considers the implications of what it means to take seriously the personally-relevant experiences of teachers as they participate in scientific research. All in all, this collection of research examines what teachers can gain from RET participation in ways that other research has not necessarily considered. Through the viewpoint of three distinct conceptual lenses, this work seeks to shed light on teachers’ experiences and learning within the discipline and community of science, and hopes to inform researchers, program designers, and other interested stakeholders in the science education community about the possibilities for teacher learning when teachers are provided opportunities to participate in science research.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the School of Teacher Education in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 27, 2019.

**NOTE (Keywords):**professional development, Research Experiences for Teachers, science education, science teacher learning, science teaching and learning

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Sherry A. Southerland, Professor Co-Directing Dissertation; Lama Z. Jaber, Professor Co-Directing Dissertation; Kristine C. Harper, University Representative; Roxanne M. Hughes, Committee Member; Ian Whitacre, Committee Member.

**SUBJECT:**Science--Study and teaching

**DEGREE:**Doctoral

**Record number: 44**

**FILENAME:**Davis\_fsu\_0071N\_15213.pdf

**TITLE:**Listening to Bi-Musical Blackness: Towards Courageous Affirmation of Black String Musicians in Predominantly White Institutions

**AUTHOR:**Davis, Danielle

**MEMBER (Professor Directing Thesis):**Gunderson, Frank D.

**MEMBER (Committee Member):**Bakan, Michael B.

**MEMBER (Committee Member):**Bugaj, Kasia

**MEMBER (Committee Member):**Punter, Melanie

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (129 pages)

**ABSTRACT:**This project investigates Black American string players’ experience of racism, bi-musicality, and multi-musicality in their musical and personal lives within the context of higher education. The project brings into focus the identities and experiences of Black string students leading to the development of nigrescence, racial contextualization, and code-switching in predominantly white institutions. I argue that the bicultural experiences of Black American string musicians at Florida State University generate a bi-musicality that is complicated by marginalization, isolation, and racism in college music programs. Using ethnographic fieldwork, bi-aural analysis, and interviews with students, this project gives voice to Black string musicians who may not have had the courage or awareness to recognize and address this phenomenon. I apply methodologies from music education, ethnomusicology and other disciplines using ethnography, archived materials, visual media, print, and web sources to help professors and students foster a broad sense of Black musical identity. I advocate for a pedagogy that constructs culturally affirming worlds of musical experience–e.g., Old Time, Indian (Hindustani and Carnatic), and Afro-Peruvian musics– for Black string musicians to navigate using their bi-musical Blackness.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the College of Music in partial fulfillment of the requirements for the degree of Master of Music.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 3, 2019.

**NOTE (Keywords):**bi-aurality, bi-musicality, Blackness, identity, Racism

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Frank Gunderson, Professor Directing Thesis; Michael B. Bakan, Committee Member; Katarzyna Bugai, Committee Member; Melanie Punter, Committee Member.

**SUBJECT:**Music--Instruction and study

**DEGREE:**Masters

**Record number: 45**

**FILENAME:**Dexter\_fsu\_0071E\_15089.pdf

**TITLE:**An Examination of Stressors Experienced by Second-Year Students in an Online Medical Education Program

**AUTHOR:**Dexter, Nadine Doty

**MEMBER (Professor Co-Directing Dissertation):**Schrader, Linda B.

**MEMBER (Professor Co-Directing Dissertation):**Iatarola, Patrice

**MEMBER (University Representative):**Jakubowski, Elizabeth M.

**MEMBER (Committee Member):**Park, Toby J.

**MEMBER (Committee Member):**Schwartz, Robert A.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Education

**CORPORATE NAME:**Department of Educational Leadership and Policy Studies

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (108 pages)

**ABSTRACT:**Medical students enrolled in medical schools around the nation today are a vital part of continuing to provide quality health care services to patients. The success of these students in their educational endeavors is important to the health and well-being of future patients that they will serve. These students first become exposed to immense stress while in medical school, which will follow them into their residencies and into their medical practices. This will impact patient care and the quality of care for years to come. This study examines stressors experienced by medical students who are in their second year of medical education. This study also explores which coping strategies for managing stress were utilized by medical students. Finally, this study investigates which coping strategies succeeded for students and if those strategies were provided by their educational institution or were provided outside of the medical education environment.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Educational Leadership and Policy Studies in partial fulfillment of the requirements for the degree of Doctor of Education.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 27, 2019.

**NOTE (Keywords):**burnout, decision making, medical education, medical students, quality of life, stress

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Linda Schrader, Professor Co-Directing Dissertation; Patrice Iatrola, Professor Co-Directing Dissertation; Elizabeth Jakubowoski, University Representative; Toby Park, Committee Member; Robert A. Schwartz, Committee Member.

**SUBJECT:**Education, Higher

**SUBJECT:**School management and organization

**SUBJECT:**Educational leadership

**DEGREE:**Doctoral

**Record number: 46**

**FILENAME:**Dilbeck\_fsu\_0071E\_15045.pdf

**TITLE:**Harnessing Molecular Photon Upconversion with Self-Assembled Multilayers

**AUTHOR:**Dilbeck, Tristan

**MEMBER (Professor Directing Dissertation):**Hanson, Kenneth G.

**MEMBER (University Representative):**Oates, William

**MEMBER (Committee Member):**Strouse, Geoffrey F.

**MEMBER (Committee Member):**Zhu, Lei, 1978-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Chemistry and Biochemistry

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (135 pages)

**ABSTRACT:**Molecular photon upconversion via triplet−triplet annihilation (TTA-UC) combines two or more low energy photons to generate a higher energy excited state. It is an emerging strategy to potentially increase maximum solar cell efficiencies from 33% to greater than 43%, surpassing the Shockley-Queisser limit. In this dissertation, we introduce self-assembled bilayers on high surface area metal oxide films as a strategy to facilitate TTA-UC. Due to its modular nature, this formation strategy offers unique geometric and spatial control of donor−acceptor interactions at an interface. In Chapter 3, we discuss the use of self-assembled bilayers of acceptor and sensitizer molecules on high surface area metal oxides as a means of facilitating TTA-UC emission and generating an integrated TTA-UC dye-sensitized solar cell. The bilayer films generate photocurrent by two different mechanisms: (1) direct excitation and electron injection from the acceptor molecule and (2) low-energy light absorption by the sensitizer molecule followed by TTA-UC and electron injection from the acceptor upconverted state, as evidenced by intensity dependence and IPCE measurements. We also compare the energy transfer and photocurrent generation efficiency of the bilayer to a heterogeneous system, confirming the superior design of the bilayer structure. In Chapter 4, we explore the hypothesized mechanism for TTA-UC in a bilayer film. Steady-state and time-resolved emission/absorption spectroscopy were used to determine the rate constants of the processes involved. The rate constants indicate that sensitizer to acceptor triplet energy transfer as well as sensitizer and acceptor nonradiative decay rates are the primary efficiency limiting processes for TTA-UC at the interface. This information can help to guide the design of new self-assembled UC films, a critical step toward the long-term goal of generating a practical UC solar cell. The low solar energy conversion efficiency of TTA-UC solar cells can be attributed, at least in part, to the relatively narrow absorption features of the sensitizer molecule. In Chapter 5, we incorporate multiple sensitizers into a TTA-UC DSSC using bilayer and trilayer self-assembly to increase broadband light absorption. The sensitizers' work cooperatively to achieve peak TTA-UC efficiency at sub-solar irradiance (<1 sun or <100 mW cm2). The trilayer device exhibits a high efficiency of 1.2 x10-3%, nearing device relevance, due to the high sensitizer density and energy transfer cascade towards the charge separation interface. In conclusion, we outline improvements that must be made to produce a viable TTA-UC solar cell that can surpass the Shockley-Queisser limit. These improvements include engineering strategies, changing the sensitizer and acceptor, finding more effective redox mediators, understanding the structure of the bilayer film, and more. Efficient TTA-UC and photocurrent generation have the potential to increase the efficiency of existing record solar cells by more than 1%.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Chemistry and Biochemistry in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 5, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Kenneth G. Hanson, Professor Directing Dissertation; William S. Oates, University Representative; Geoffrey Strouse, Committee Member; Lei Zhu, Committee Member.

**SUBJECT:**Chemistry

**DEGREE:**Doctoral

**Record number: 47**

**FILENAME:**Dimanche\_fsu\_0071E\_14924.pdf

**TITLE:**Essays on the Economic Outcomes of Children of Immigrants

**AUTHOR:**Dimanche, Ketsia S. (Stephanie)

**MEMBER (Professor Directing Dissertation):**Mason, Patrick L.

**MEMBER (University Representative):**Davis, Katrinell

**MEMBER (Committee Member):**Schmertmann, Carl P.

**MEMBER (Committee Member):**Fournier, Gary M.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Social Sciences and Public Policy

**CORPORATE NAME:**Department of Economics

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2018

**PHYSICAL DESCRIPTION:**1 online resource (130 pages)

**ABSTRACT:**One of the main concerns about immigration is knowing whether immigrants will assimilate into American society. To assess whether immigrants have fully assimilated, the economic outcomes of their children must be analyzed. Previous research have shown that there are generational differences in economic outcomes of immigrants. These differences can be explained by differences in cognitive and noncognitive skills. The second and third chapters of this dissertation explore the relationship between immigrant status, behavioral traits and economic outcomes of young adults. In Chapter 2, I focus on earnings as the economic outcome. The analysis takes advantage of measurement of behaviors in the form of motivation, effort and control expectation from the Education Longitudinal Study of 2002 to assess the relationship between these behaviors and immigrant status on earnings of a nationally representative sample of young adults. I also examine whether differences in earnings are explained by differences in behaviors that are attributed to immigrant status. I find that being born in a foreign country positively affects earnings and motivation is the behavior that has a significant positive effect on earnings. Immigrant-native earnings differences are not explained by differences in behaviors characterized by immigrant status. These results differ by gender. In Chapter 3, I extend the analysis by focusing on the education assimilation of immigrants. I analyze the relationship between immigrant status, behavioral traits and education attainment. In contrast to Chapter 2, I find that being foreign-born and being U.S.-born with immigrant parents positively affect education attainment. Motivation, effort, and control expectation significantly affect education attainment. Differences in effort and control that are characterized by being foreign-born explain differences in education. These results differ for men and women. Lastly, in Chapter 4, I examine the role of parental wealth in mitigating the effect of immigrant status and behavioral traits on education attainment. I find that parental wealth is a significant factor determining education attainment. More importantly, wealth is a moderating factor for the effect of race on education. While controlling for wealth and behavioral traits, Asians and Blacks see considerable increase in their education attainment.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Economics in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Fall Semester 2018.

**NOTE (Date of Defense):**November 9, 2018.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Patrick L. Mason, Professor Directing Dissertation; Katrinell Davis, University Representative; Carl Schmertmann, Committee Member; Gary Fournier, Committee Member.

**SUBJECT:**Economics

**DEGREE:**Doctoral

**Record number: 48**

**FILENAME:**DONG\_fsu\_0071E\_15144.pdf

**TITLE:**Bayesian Tractography Using Geometric Shape Priors

**AUTHOR:**Dong, Xiaoming

**MEMBER (Professor Directing Dissertation):**Srivastava, Anuj, 1968-

**MEMBER (University Representative):**Klassen, E. (Eric), 1958-

**MEMBER (Committee Member):**Wu, Wei

**MEMBER (Committee Member):**Huffer, Fred W. (Fred William)

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Statistics

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (92 pages)

**ABSTRACT:**Diffusion-weighted image(DWI) and tractography have been developed for decades and are key elements in recent, large-scale efforts for mapping the human brain. The two techniques together provide us a unique possibility to access the macroscopic structure and connectivity of the human brain non-invasively and in vivo. The information obtained not only can help visualize brain connectivity and help segment the brain into different functional areas but also provides tools for understanding some major cognitive diseases such as multiple sclerosis, schizophrenia, epilepsy, etc. There are lots of efforts have been put into this area. On the one hand, a vast spectrum of tractography algorithms have been developed in recent years, ranging from deterministic approaches through probabilistic methods to global tractography; On the other hand, various mathematical models, such as diffusion tensor, multi-tensor model, spherical deconvolution, Q-ball modeling, have been developed to better exploit the acquisition dependent signal of Diffusion-weighted image(DWI). Despite considerable progress in this area, current methods still face many challenges, such as sensitive to noise, lots of false positive/negative fibers, incapable of handling complex fiber geometry and expensive computation cost. More importantly, recent researches have shown that, even with high-quality data, the results using current tractography methods may not be improved, suggesting that it is unlikely to obtain an anatomically accurate map of the human brain solely based on the diffusion profile. Motivated by these issues, this dissertation develops a global approach that incorporates anatomical validated geometric shape prior when reconstructing neuron fibers. The fiber tracts between regions of interest are initialized and updated via deformations based on gradients of the posterior energy defined in this paper. This energy has contributions from diffusion data, shape prior information, and roughness penalty. The dissertation first describes and demonstrates the proposed method on the 2D dataset and then extends it to 3D Phantom data and the real brain data. The results show that the proposed method is relatively immune to issues such as noise, complicated fiber structure like fiber crossings and kissing, false positive fibers, and achieve more explainable tractography results.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Statistics in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 16, 2019.

**NOTE (Keywords):**active contours, Bayesian estimation, dMRI fiber tracts, geometric shape analysis, tractography

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Anuj Srivastava, Professor Directing Dissertation; Eric Klassen, University Representative; Wei Wu, Committee Member; Fred Huffer, Committee Member.

**SUBJECT:**Diagnostic imaging

**SUBJECT:**Radiography, Medical

**SUBJECT:**Mathematics

**SUBJECT:**Statistics

**DEGREE:**Doctoral

**Record number: 49**

**FILENAME:**Drake\_fsu\_0071E\_14972.pdf

**TITLE:**Carbon Biogeochemistry of Pristine and Impacted Catchments of the Congo Basin

**AUTHOR:**Drake, Travis William

**MEMBER (Professor Directing Dissertation):**Spencer, Robert G. M.

**MEMBER (University Representative):**Zhao, Tingting

**MEMBER (Committee Member):**Chanton, Jeffrey P.

**MEMBER (Committee Member):**Fuentes, Mariana

**MEMBER (Committee Member):**Six, Johan

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Earth, Ocean and Atmospheric Science

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2018

**PHYSICAL DESCRIPTION:**1 online resource (158 pages)

**ABSTRACT:**Inland waters receive significant inputs of organic and inorganic carbon (OC and IC) from terrestrial ecosystems. This water-borne carbon (C) is subsequently stored, processed, outgassed, or exported downstream depending a suite of biogeochemical controls. These processes are increasingly well-constrained in temperate systems, but our global models are hindered by a lack of quantitative and mechanistic understanding of the tropics. Within the tropics, there is no larger knowledge-gap than the Congo Basin. Although the Congo is still mostly pristine, increasing rates of deforestation threaten to mobilize soil organic carbon (SOC) to rivers, albeit with unknown fate. Here I present seasonal data from a pristine montane forest system in the Congo Basin that highlights the onset of the wet season as a key period for C export. Results from this pristine system show a flushing of boilable and heterogeneous dissolved organic matter (DOM) during the first seasonal rains. Ultimately, this novel dataset provides a baseline against which to assess future change. To examine the effect of deforestation on stream C biogeochemistry in the Congo, I employed a paired-watershed approach in which catchments with varying degrees of forest loss were compared to pristine, primary forest endmembers in both lowland and montane forest ecosystems. Carbon from deforested catchments was old, aliphatic, and biolabile, exhibiting a composition similar to that of microbial biomass and SOC from deep horizons. Deforested streams were also warmer, lower in dissolved oxygen, and more supersaturated in carbon dioxide, potentially reflecting higher rates of in-situ OC respiration relative to forested catchments. Together, these results suggest that destabilized SOC may be respired and vented through the aquatic pathway following deforestation and land-use conversion to agriculture. Lastly, to uncover the source of condensed aromatics present in streams draining both lowland and montane pristine forest catchments, the seasonal composition of wet and dry deposition in a lowland forest was assessed. The deposition of nitrogen and condensed aromatic compounds was associated with the seasonal burning of savanna-woodland biomass, indicating the widespread effect of slash-and-burn agriculture on the interior biogeochemistry of the Congo basin. The results presented in this thesis provide new insight into the effects of seasonality, deforestation, and fire on the carbon cycle of a major and understudied tropical watershed.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Earth, Ocean and Atmospheric Science in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Fall Semester 2018.

**NOTE (Date of Defense):**December 7, 2018.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Robert G. M. Spencer, Professor Directing Dissertation; Tingting Zhao, University Representative; Jeffrey P. Chanton, Committee Member; Mariana Fuentes, Committee Member; Johan Six, Committee Member.

**SUBJECT:**Chemical oceanography

**DEGREE:**Doctoral

**Record number: 50**

**FILENAME:**Ellis\_fsu\_0071N\_15191.pdf

**TITLE:**Zeitfreiwillige and Freikorpskämpfer Paramilitaries of Early Weimar Germany

**AUTHOR:**Ellis, David Sloan

**MEMBER (Professor Directing Thesis):**Grant, Jonathan A., 1963-

**MEMBER (Committee Member):**Williamson, George S.

**MEMBER (Committee Member):**Koslow, Jennifer Lisa, 1970-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of History

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (114 pages)

**ABSTRACT:**During the early years of the Weimar Republic paramilitary organizations were commonplace. With the dissolution of the Imperial Army after the German defeat in World War I, the new republican government needed a means to ensure its authority and fostered volunteer troops known as Freikorps. These units could be raised and led by any with both the financial and charismatic means to do so and held no uniform model or political motivation. They saw the most action during the German Revolution, along the Eastern Border, and in the Ruhr. Their campaigns during the Revolution secured the position of the new administration but split the Labor Parties which prevented a majority government from forming for much of the 1920s. The string of short-lived cabinets prevented the stabilization of the Weimar Government, provided strong extra-constitutional powers to the President, and created the opportunity for previously fringe radical parties to become legitimate coalition members. After the acceptance of the Treaty of Versailles and the implementation of its restrictions, these units became highly disillusioned and hostile towards the Weimar Government and drifted towards the political Right. Led by nationalistic generals and political officials who wanted to reject the Treaty, the Freikorps units that emerged from the Revolution attempted several times to violently overthrow the government, but none would succeed. Their failures and the continued pressure of the Entente to disband all paramilitaries pushed the remaining Freikorps fighters into police units, the border guard, secret military reserves, and labor groups. They would reappear whenever Germany’s borders became threatened, but gradually lost support in the stability of the Golden Age of Weimar in the mid-1920s. Unwilling to accept the government and wholly disperse, Freikorps members moved into politics itself via war veteran organizations and the growing Right-wing parties. Having fought to support and later destroy the Weimar Government, they knew the only way to bring about the change they wanted to see would be to enter the system itself. Raised to provide authority to the Republic, the Freikorps greatly weakened the political Left, allowed the Right time to recuperate, bolstering their ranks in the 1930s.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the Department of History in partial fulfillment of the requirements for the degree of Master of History.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 2, 2019.

**NOTE (Keywords):**Freikorps, German, Interwar Period, Paramilitaries, Weimar Republic

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Jonathan A. Grant, Professor Directing Thesis; George Williamson, Committee Member; Jennifer Koslow, Committee Member.

**SUBJECT:**History

**DEGREE:**Masters

**Record number: 51**

**FILENAME:**Eubanks\_fsu\_0071N\_15204.pdf

**TITLE:**Managing Modernist Musicians: Quaker Stewardship in the Work of Blanche Wetherill Walton

**AUTHOR:**Eubanks, Emily Rebecca

**MEMBER (Committee Member):**Lumsden, Rachel, 1977-

**MEMBER (Committee Member):**Seaton, Douglass

**MEMBER (Professor Directing Thesis):**Von Glahn, Denise, 1950-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (127 pages)

**ABSTRACT:**Blanche Wetherill Walton played a significant role in the development of America’s modernist music culture throughout the 1920s and 1930s. Her legacy has largely been preserved through her roles as a patron and salonnière during this time, which included sending financial aid to composers, housing modernist musicians, hosting meetings of the New York Musicological Society, and hosting musicales in her home. However, Walton’s participation in modernist music extended far beyond traditional patron or salonnière roles. In addition to offering financial gifts, Walton carried out tasks typical of a music agent. These activities included organizing auditions, sending and receiving programs and scores, disseminating writings, corresponding, booking dates, securing venues, coordinating networking opportunities, handling contracts, and arranging lessons on behalf of modernist musicians. The depth and breadth of Walton’s work sets her apart from other music patrons; she acted as a one-woman agent for a select, yet still large, group of modernists. Walton’s upbringing in a wealthy Philadelphia family ensured that she gained managerial skills necessary for overseeing and running a large household. As a young woman of the elite class Walton also learned social etiquette and benefitted from her family’s connections to influential individuals in American music culture. These experiences would prove to be invaluable to Walton’s work in assisting modernist musicians in the early twentieth century. Walton’s upbringing also featured strong ties to her family’s Quaker background. As direct descendants of the founder of the Free Quakers, the Wetherills would have been well versed in Quaker values of simplicity, peace, integrity, community, equality, and stewardship. These tenets influenced Walton’s work in modernist music culture as she generously offered her resources, skills, time, and energy to promote modernist musicians and their music. Despite her family’s wealth and a large settlement she received following the death of her husband in 1903, Walton experienced financial strains in the aftermath of the 1929 stock market crash. In addition to providing funds and housing to musicians whenever possible, Walton supplemented this support with managerial assistance. Thanks to her upbringing, Walton knew how to be involved in the day-to-day activities of music culture, understood the importance of working hard on behalf of others, and lived comfortably enough to devote her time and energy to this work. Her influence was far reaching and influenced the careers of many modernist musicians, including Henry Cowell, Ruth Crawford, Imre Weisshaus (Paul Arma), Aaron Copland, Joseph Szigeti, and Wesley Kuhnle. This project examines her work on behalf of these six composers, though many others also benefitted from her work and generosity. This group of musicians speaks to the diversity of Walton’s interests in modernist music, encompassing a wide range of modernist compositional approaches, individuals from a variety of backgrounds, both composers and performers, and both male and female modernists. Examining Walton’s managerial work not only illuminates the extent of her involvement in modernist music culture but also provides a better understanding of the structure and state of America’s modernist music culture in the 1920s and 1930s. By looking at the influence Quaker beliefs had on Walton’s work as a manager, this project also suggests that religious values may serve as a new framework through which we may better understand modernist music culture.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the College of Music in partial fulfillment of the requirements for the degree of Master of Music.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 13, 2019.

**NOTE (Keywords):**Agent, Blanche Wetherill Walton, Manager, Modernist, Quaker, Stewardship

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Denise Von Glahn, Professor Directing Thesis; Rachel Lumsden, Committee Member; Douglass Seaton, Committee Member.

**SUBJECT:**Gender expression

**SUBJECT:**Study and teaching

**SUBJECT:**Gender identity

**SUBJECT:**Study and teaching

**SUBJECT:**United States--History

**DEGREE:**Masters

**Record number: 52**

**FILENAME:**Eudy\_fsu\_0071E\_15091.pdf

**TITLE:**Digital Strategies in the Art Museum: A Soft Systems Case Study

**AUTHOR:**Eudy, Victoria Nichole

**MEMBER (Professor Directing Dissertation):**Love, Ann Rowson, 1967-

**MEMBER (University Representative):**Marty, Paul F.

**MEMBER (Committee Member):**Villeneuve, Pat, 1955-

**MEMBER (Committee Member):**Broome, Jeff

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Fine Arts

**CORPORATE NAME:**Department of Art Education

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (182 pages)

**ABSTRACT:**This qualitative, soft-systems case study examined the digital strategy development process at a large Midwest art museum in the United States. The study explored the process of working together to create the strategy, the role of education, and the general form of the development process through a soft systems lens. The findings of this case study include the importance of open communication and organizational flexibility in order to arrive at a digital strategy, the importance of an outside consultant to guide the process, and the role of the educator as an advocate for big picture thinking in the process. While this study provides an in-depth look at digital strategy development, further research is necessary to understand the long-term effects and success of digital strategies in the art museum. Regardless, this study argues for opportunities for digital strategy development in smaller to mid-sized museums, placing educators as important advocates of evaluation of the digital strategy process, and maintaining organizational flexibility in developing digital strategies.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Art Education in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 1, 2019.

**NOTE (Keywords):**art museum, digital strategy, soft systems, systems thinking

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Ann Rowson Love, Professor Directing Dissertation; Paul Marty, University Representative; Pat Villeneuve, Committee Member; Jeff Broome, Committee Member.

**SUBJECT:**Museums

**SUBJECT:**Study and teaching

**SUBJECT:**Arts--Management

**DEGREE:**Doctoral

**Record number: 53**

**FILENAME:**Farahani\_fsu\_0071N\_15034.pdf

**TITLE:**Degradation of Perfluorooctanoic Acid by a Non-Thermal Plasma Reactor and Bio-Reactors

**AUTHOR:**Farahani, Meysam

**MEMBER (Professor Directing Thesis):**Tang, Youneng

**MEMBER (Committee Member):**Locke, Bruce R.

**MEMBER (Committee Member):**Clark, Clayton J., 1971-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**FAMU-FSU College of Engineering

**CORPORATE NAME:**Department of Civil and Environmental Engineering

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (52 pages)

**ABSTRACT:**Perfluorooctanoic acid (PFOA) is persistent in environment due to its stable structure. It is also toxic to animals and human. The objective of this research is to remove PFOA with a non-thermal plasma reactor, anaerobic and aerobic bio-reactors, and their combination. Mineralization and defluorination (i.e., fluoride production) occurred in the plasma reactor. Neither PFOA removal nor fluoride production was observed in the bioreactors. In the plasma reactor with Argon as the carrier gas, 20 µM of PFOA in deionized (DI) water was removed to 4.22 and 4.04 µM, respectively, when the hydraulic retention time (HRT) was 0.21 s and 0.15 s, respectively. When the carrier gas was changed to Helium, PFOA was removed to 3.85 µM and 3.77 µM, respectively. Therefore, the carrier gas and HRT did not have significant effect on PFOA degradation. However, the carrier gas and HRT strongly affected the defluorination rate: 11% (for HRT = 0.21 s) and 6.5% (for HRT = 0.15) when Argon was the carrier gas, and 22% (for HRT = 0.21 s) and 8.6% (for HRT = 0.15 s) when Helium was the carrier gas. Consequently, a higher energy yield was achieved with Helium as the carrier gas (maximum of 11.3×10-11 mole F- production/J) than with Argon as the carrier gas (maximum of 6.43×10-11 mole F- production/J). Perfluoroheptanoic acid (PFHpA) and perfluorohexanoic acid (PFHxA) were observed in the effluent of the non-thermal plasma reactor by using liquid chromatography-tandem mass spectrometry (LC/MS/MS). The intermediates production rate was higher when argon was the carrier gas compared with Helium, probably because the degradation mechanisms are different for PFOA and their intermediates.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the Department of Civil and Environmental Engineering in partial fulfillment of the requirements for the degree of Master of Science.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 25, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Youneng Tang, Professor Directing Thesis; Bruce R. Locke, Committee Member; Clayton J. Clark Ⅱ, Committee Member.

**SUBJECT:**Environmental engineering

**DEGREE:**Masters

**Record number: 54**

**FILENAME:**Feng\_fsu\_0071E\_15011.pdf

**TITLE:**Marked Determinantal Point Processes

**AUTHOR:**Feng, Yiming

**MEMBER (University Representative):**Nolder, Craig

**MEMBER (Committee Member):**Niu, Xufeng

**MEMBER (Committee Member):**Bradley, Jonathan R.

**MEMBER (Professor Directing Dissertation):**Huffer, Fred W. (Fred William)

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Statistics

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (137 pages)

**ABSTRACT:**Determinantal point processes (DPPs), which can be dened by their correlation kernels with known moments, are useful models for point patterns where nearby points exhibit repulsion. They have many nice properties, such as closed-form densities, tractable estimation of parameterized families, and no edge eects. In the past, univariate DPPs have been well-studied, both in discrete and continuous settings although their statistical applications are fairly recent and still rather limited, whereas the multivariate DPPs, or the so-called multi-type marked DPPs, have been little explored. In this thesis, we propose a class of multivariate DPPs based on a block kernel construction. For the marked DPP, we show that the conditions of existence of DPP can easily be satised. The block construction allows us to model the individually marked DPPs as well as controlling the scale of repulsion of points having dierent marks. Unlike other researchers who model the kernel function of a DPP, we model its spectral representation, which not only guarantees the existence of the multivariate DPP, but makes the simulation-based estimation methods readily available. In our research, we adopted bivariate complex Fourier basis, which demonstrates nice properties such as constant intensity and approximate isotropy within a short distance between the nearby points. The parameterized block kernels can approximate to commonly-used covariance functions using Fourier expansion. The parameters can be estimated using Maximum Likelihood Estimation, Bayesian approach and Minimum Contrast Estimation.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Statistics in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 17, 2019.

**NOTE (Keywords):**Determinantal Point Processes, DPP, Marked Point Processes, Multivariate DPP, Poisson Processes

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Fred Huﬀer, Professor Directing Dissertation; Craig Nolder, University Representative; Xufeng Niu, Committee Member; Jonathan Bradley, Committee Member.

**SUBJECT:**Statistics

**DEGREE:**Doctoral

**Record number: 55**

**FILENAME:**Findley\_fsu\_0071E\_15023.pdf

**TITLE:**Connecting Disciplinary and Pedagogical Spaces in Statistics: Perspectives from Graduate Teaching Assistants

**AUTHOR:**Findley, Kelly P.

**MEMBER (Professor Co-Directing Dissertation):**Whitacre, Ian Michael

**MEMBER (Professor Co-Directing Dissertation):**Jakubowski, Elizabeth M.

**MEMBER (University Representative):**Chicken, Eric, 1963-

**MEMBER (Committee Member):**Jaber, Lama

**MEMBER (Committee Member):**Forman, Jennifer Kaplan, 1965-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Education

**CORPORATE NAME:**School of Teacher Education

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (253 pages)

**ABSTRACT:**As a young and dynamically evolving discipline, statistics evokes many conceptions about its purpose, the nature of its development, and the tools and mindset needed to engage in statistical work. While much research documents the perceptions of statisticians and experts on these matters, little is known about how the disciplinary perspectives of statistics instructors may interact with the work of teaching. Such connections are likely relevant since research has shown that teachers’ and instructors’ views about the discipline they teach inform their instructional approaches. This work specifically focuses on the disciplinary views of graduate teaching assistants (GTAs), who continue to serve a critical role in undergraduate instruction. Using multiple case study design, I document the views, experiences, and teaching practices of four statistics GTAs over the course of a full year—from their induction into the department in the fall, until their first solo-teaching opportunity the following summer. From the literature, I organized important disciplinary themes in statistics, including disciplinary purpose, epistemology, and disciplinary engagement. Targeting issues and questions stemming from these areas, I documented the various perspectives, models, and tensions that characterized the disciplinary views of the participants. I also documented the relevant experiences and influences that motivated these views. Additionally, I explored the GTAs’ pedagogical views and vision for teaching introductory statistics while looking for possible connections (and glaring disconnects) between these views and their disciplinary views. Finally, I observed their instruction and considered the participants’ teaching reflections as I looked for alignment between their expressed views and actual instructional decisions. From the data, I found that several of the GTAs expressed sophisticated views and expert notions about the discipline. There was a clear disconnect, however, between their perceptions of disciplinary work and the work of students in an introductory statistics course. Despite recognition that statistical questions typically do not have right answers, that statistical methods are often quite flexible and contextually-driven, or that many disciplinary elements developed through community negotiation rather than discovery, the GTAs struggled to bridge these considerations to the tasks being posed and the practices being emphasized in introductory courses. The participants also expressed a basic desire to engage students in practice problems and activities, yet their instructional visions were not specific and well-grounded in rich classroom experiences that modeled student-centered pedagogy. As a result, all four GTAs converged on a singular vision for introductory statistics. This vision involved focusing on “the basics,” acquainting students with a wide array of procedures, honing students’ computational abilities, and emphasizing statistical problem-solving as a pursuit for right answers. This dissertation study provides insights into disciplinary tensions that may be of value in developing an instrument for assessing the disciplinary views of instructors and students alike. GTAs without well-developed views may need opportunity to engage in rich, open-ended tasks that serve to develop their disciplinary perspectives. Additionally, this work reveals how GTAs may struggle to bridge their perceptions of advanced disciplinary work to the work of their own students. Acquaintance and experience engaging in tasks that promote informal inferential reasoning or exploratory data analysis, coupled with connections to situated and constructivist learning theories, may enrich GTAs’ instructional visions as they see how disciplinary and instructional spaces may interact and inform one another.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the School of Teacher Education in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 28, 2019.

**NOTE (Keywords):**Disciplinary Views, Epistemology, Statistics Education, Teaching Assistants

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Ian Whitacre, Professor Co-Directing Dissertation; Elizabeth M. Jakubowski, Professor Co-Directing Dissertation; Eric Chicken, University Representative; Lama Jaber, Committee Member; Jennifer J. Kaplan, Committee Member.

**SUBJECT:**Mathematics--Study and teaching

**DEGREE:**Doctoral

**Record number: 56**

**FILENAME:**Francis\_fsu\_0071E\_15029.pdf

**TITLE:**Novel Applications of Sampling-Based Model Predictive Optimization

**AUTHOR:**Francis, Griffin Doran

**MEMBER (Professor Directing Dissertation):**Collins, E. (Emmanuel)

**MEMBER (University Representative):**Roberts, Rodney G.

**MEMBER (Committee Member):**Clark, Jonathan E.

**MEMBER (Committee Member):**Kumar, Rajan

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**FAMU-FSU College of Engineering

**CORPORATE NAME:**Department of Mechanical Engineering

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (82 pages)

**ABSTRACT:**This work presents two novel use cases to study domain applications of Sampling- Based Model Predictive Optimization (SBMPO). In the first case study, SBMPO is demonstrated to provide computationally efficient, direct generation of optimal trajectories for autonomous spacecraft rendezvous using time or distance cost functions. This effort addresses the challenges associated with the six degree-of-freedom relative motion planning problem presented by the rendezvous scenario. Additionally, various modifications to the fundamental SBMPO algorithm are developed to accommodate the domain-specific constraints associated with the orbital navigation. In the second study, SBMPO is applied to the resource allocation problem associated with cost-based scheduling of distributed energy resources in a microgrid. Unlike the spacecraft trajectory planning scenario, the resource allocation task is characteristic of a more generalized optimal control problem. In any case, SBMPO is applied within the Advanced Optimal Resource Allocation (AORA) dispatch control scheme to achieve cost-optimal sequencing of power resources to deliver a predicted load.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Mechanical Engineering in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 1, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Emmanuel G. Collins, Jr., Professor Directing Dissertation; Rodney Roberts, University Representative; Jonathan Clark, Committee Member; Rajan Kumar, Committee Member.

**SUBJECT:**Mechanical engineering

**DEGREE:**Doctoral

**Record number: 57**

**FILENAME:**Francis\_fsu\_0071N\_15241.pdf

**TITLE:**Variable Temperature Transport Critical Current Measurements on REBCO Coated Conductors

**AUTHOR:**Francis, Ashleigh Renee

**MEMBER (Professor Directing Thesis):**Larbalestier, D. (David)

**MEMBER (Committee Member):**Kametani, Fumitake

**MEMBER (Committee Member):**Guo, Wei, (Professor of Mechanical Engineering)

**MEMBER (Committee Member):**Abraimov, Dmytro

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**FAMU-FSU College of Engineering

**CORPORATE NAME:**Department of Mechanical Engineering

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (55 pages)

**ABSTRACT:**REBCO coated conductors have recently become viable for high field superconducting magnets, but their use brings new challenges. Knowledge of the transport critical current density over a wide range of magnetic field and temperature, Jc(B, T), is essential to accurately model quench behavior and assure protection in REBCO superconducting magnets. At the National High Magnetic Field Laboratory (NHMFL), 12 km of REBCO tapes were purchased and characterized at 4.2 Kelvin (K) with field orientation B⊥tape and at 18° off-axis to select tapes for the construction of the all-superconducting 32 T user magnet that successfully reached field recently. Of the tapes selected for 32 T, three were chosen for additional Jc(B, T) characterization from 4.2 K to 75 K and fields from 1 T to 15 T in the B⊥tape orientation. A new probe was designed to accommodate these measurements on 4mm wide REBCO tapes up to 700 Amps. We found that the transport Jc(B, T) dependence described using Ginzburg-Landau models of vortex pinning for HTS fit well to a power law for Jc(B) and to an exponential temperature dependence for T < 45 K and 3 T < B < 15 T. A fourth tape from the 32 T magnet was then selected to test the predictability of our modeling. Using this extensive data set, the correlation between Jc(B, 4.2 K) and Jc(B , T) enabled us to predict Jc(B, T) for all tapes procured for the 32 T magnet with an accuracy of 10% or less for T < 40 K.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the Department of Mechanical Engineering in partial fulfillment of the requirements for the degree of Master of Science.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 19, 2019.

**NOTE (Keywords):**Flux Pinning, High Temperature Superconductivity, Magnet Design, REBCO, Superconductivity, Transport Critical Current Measurements

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**David C. Larbalestier, Professor Directing Thesis; Fumitake Kametani, Committee Member; Wei Guo, Committee Member; Dmytro Abraimov, Committee Member.

**SUBJECT:**Materials science

**DEGREE:**Masters

**Record number: 58**

**FILENAME:**Fricker\_fsu\_0071E\_14975.pdf

**TITLE:**A Geography of Tornado Casualties in the United States

**AUTHOR:**Fricker, Tyler

**MEMBER (Professor Directing Dissertation):**Elsner, James B.

**MEMBER (University Representative):**Hart, Robert E. (Robert Edward), 1972-

**MEMBER (Committee Member):**Mesev, Victor

**MEMBER (Committee Member):**McCreary, Tyler

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Social Sciences and Public Policy

**CORPORATE NAME:**Department of Geography

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2018

**PHYSICAL DESCRIPTION:**1 online resource (127 pages)

**ABSTRACT:**This dissertation includes a series of chapters that evaluate tornado casualties in a spatial, historical, and social context. Previous studies have identified the location of tornado casualties using the best available data and assessed the link between social, economic, and demographic factors to the number of tornado casualties. This research builds and deviates from earlier research through the use of a number of geographical methods. More specifically, the research presented here aims to (1) predict the rate of tornado casualties as a function of tornado strength and population, (2) provide a dasymetric method to estimate socioeconomic and demographic variables at the tornado-level, and (3) define and identify unusually devastating tornadoes---those that cause significantly more casualties than some expected rate---which in turn recognizes vulnerable communities throughout the United States. Tornado records are fit to two different statistical models containing estimates of energy dissipation and population density: (1) an additive model and (2) an interactive model. Tornado energy dissipation is estimated through a physical model, which expresses the strength of a tornado. Results show that, for the additive model, a doubling in population increases the casualty rate by 21% [(17, 24)%, 95% credible interval] and a doubling in energy dissipation increases the casualty rate by 33% [(30, 35)%, 95% credible interval]. Results also show that, for the interactive model, the percentage increase in casualties with increasing energy dissipation increases with population density, and the percentage increase in casualties with increasing population density increases with energy dissipation. Estimates of socioeconomic and demographic variables at the tornado-level are found through dasymetric calculations that can be analyzed independently or in combination with other attributes in the historical record. These estimates are validated using known fatalities and actual tornado paths found within the National Weather Service's Damage Assessment Toolkit. Results show large correlation between estimated and observed fatalities exceeding .93 for four distinct age groups and .99 for sex. Unusually devastating tornadoes are defined and identified through a model for tornado casualties that builds on the interactive model, but includes estimates of socioeconomic and demographic variables. Results show that unusually devastating tornadoes can occur anywhere in the United States, but appear more consistently over parts of the rural South. By identifying clusters of unusually devastating tornadoes, individual communities can be further examined. For example, three examples of unusually devastating tornadoes include: (1) the 1998 Spencer, South Dakota tornado, (2) the 2000 and 2003 Camilla, Georgia tornadoes, and (3) the 2015 Garland-Rowlett, Texas tornado. Each of these cities have their own socioeconomic and demographic profiles, yet were hit by tornadoes that caused more casualties than expected given a model for tornado casualties. The results provide a substantial improvement in the quantitative and geographic understanding of tornado casualties across the United States. They also set the stage for future critiques of the systems in place that drive human vulnerability to tornadoes. In this sense, the results highlight the need for additional work to be devoted to understanding the tornado casualty problem. The methods presented here supply a foundation for future studies that evaluate changes in the tornado casualty landscape and make sense of the challenges many communities face with regard to the tornado hazard.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Geography in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Fall Semester 2018.

**NOTE (Date of Defense):**November 30, 2018.

**NOTE (Keywords):**Casualties, Energy, Tornado, Vulnerability

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**James B. Elsner, Professor Directing Dissertation; Robert Hart, University Representative; Victor Mesev, Committee Member; Tyler McCreary, Committee Member.

**SUBJECT:**Geography

**SUBJECT:**Atmospheric sciences

**DEGREE:**Doctoral

**Record number: 59**

**FILENAME:**Frketic\_fsu\_0071E\_14912.pdf

**TITLE:**Manufacturing of Multimaterial Composites via Dual Robotic 3D Printing

**AUTHOR:**Frketic, Jolie Breaux

**MEMBER (Professor Directing Dissertation):**Dickens, Tarik

**MEMBER (University Representative):**Clark, Jonathan E.

**MEMBER (Committee Member):**Ramakrishnan, Subramanian

**MEMBER (Committee Member):**Liang, Zhiyong (Richard)

**MEMBER (Committee Member):**Wang, Hui

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**FAMU-FSU College of Engineering

**CORPORATE NAME:**Department of Industrial and Manufacturing Engineering

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (147 pages)

**ABSTRACT:**Composite additive manufacturing (AM) is able to create products that have never before been able to be made. However, several processing and material setbacks keep AM from becoming the all-encompassing methodology for multifunctional printed composite parts. Current AM methods to create composites are focused on printing single materials, and while able to create complex parts quickly, have yet to leverage their full capability. To make strides towards an all-encompassing multi-material additive manufacturing system, a collaborative dual selective compliance assembly robotic arm manufacturing system has been developed for cooperative additive manufacturing (CO-AM). The inclusion of cooperative robotic systems working simultaneously on a part while near each other spurs inquiry to the issues of effectiveness and practicality compared to what is witnessed in conventional operation. This research highlights our work on fundamentally understanding the process control-structure-property relationships of a novel mechatronic system for additive processing. The first study aims to narrate the design process and capabilities of this cooperative system, as well as measure current performance under typical operation. Investigations were aided with (1) computer vision analysis and (2) dynamic modeling to provide insight into the limitations of the current system. This study seeks to benchmark the performance of CO-AM as it compares to modern on market systems. The study shows that the CO-AM system can reach the same resolution as typical extrusion manufacturing devices. A time study found that a 36% reduction in time is able to be achieved in a non-optimized part, yielding an advantage over typical systems. A second study investigates the processing parameters (road overlap, speed, the time between extrusions, stepping and nozzle size) in CO-AM and how these process-property relationships can be used to create the strongest weld in the seam between two halves of a part printed collaboratively. From this study, it was found that the speed of printing, print overlap, and nozzle size were the most important in having a stronger weld. From these results, design rules and processing parameters for thermoplastic CO-AM were developed. Finally, a study was conducted to investigate the polymer welding and adhesion between adjoining printed roads. Theoretical studies have been used to determine how polymer-polymer welding at the interface between adjacent roads affects the strength between these printed interfaces. Micrographs of printed compact tension specimen interfaces were analyzed for thermoplastic welding. An image segmentation program was developed to elucidate the polymer diffusion and adhesion of printed parts and describes the strength of the printed part. It was found that a coefficient for weld entanglement is able to accurately depict the strength of a printed thermoplastic when an assumed strength along the weld is considered to be around 25% of the full strength of an injection molded part. This helps in further studies by enhancing the knowledge of the process-property relationship that is created when using additive manufacturing.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Industrial and Manufacturing Engineering in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**January 8, 2019.

**NOTE (Keywords):**Additive Manufacturing, Fused Deposition Modeling, Robotics, SCARA

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Tarik Dickens, Professor Directing Dissertation; Jonathan Clark, University Representative; Subramanian Ramakrishnan, Committee Member; Richard Liang, Committee Member; Hui Wang, Committee Member.

**SUBJECT:**Industrial engineering

**SUBJECT:**Mechanical engineering

**SUBJECT:**Materials science

**DEGREE:**Doctoral

**Record number: 60**

**FILENAME:**Fu\_fsu\_0071E\_14906.pdf

**TITLE:**Enabling Efficient Big Data Services on HPC Systems with SHMEM-Based Programming Stack

**AUTHOR:**Fu, Huansong

**MEMBER (Professor Directing Dissertation):**Yu, Weikuan

**MEMBER (University Representative):**Ye, Ming

**MEMBER (Committee Member):**Duan, Zhenhai

**MEMBER (Committee Member):**Venkata, Manjunath Gorentla

**MEMBER (Committee Member):**Mascagni, Michael

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Computer Science

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2018

**PHYSICAL DESCRIPTION:**1 online resource (98 pages)

**ABSTRACT:**Thesis abstract With the continuous expansion of the Big Data universe, researchers have been relentlessly searching for ways to improve the efficiency of big data services, including data analytics and data infrastructures. In the meantime, there has also been an increasing interest to leverage High-performance Computing (HPC) capabilities for big data analytics. Symmetric Hierarchical Memory (SHMEM) is a popular parallel programming model thrived in the HPC realm. For many Partitioned Global Address Space (PGAS) systems and applications, SHMEM libraries are popularly used as a high-performance communication layer between the applications and underlying fast-speed interconnects. SHMEM features an one-sided communication interface. It allows remote data to be accessed in a shared-memory manner, in contrast to the conventional two-sided communication where remote data must be accessed through an explicit handshake protocol. We reveal that SHMEM offers a number of great benefits to develop parallel and distributed applications and frameworks on tightly-coupled, high-end HPC systems, such as its shared-memory style addressing model and the flexibility of its communication model. This dissertation focuses on improving the performance of big data services by leveraging a lightweight, flexible and balanced SHMEM-based programming stack. In order to realize this goal, we have studied some representative data infrastructure and data analytic framework. Specifically, key-value stores are a very popular form of data infrastructure deployed for many large-scale web services. Unfortunately, a key-value store usually adopts an inefficient communication design in a traditional server-client architecture, where the server can easily become a bottleneck in processing a huge amount of requests. Because of this, both latency and throughput can be seriously affected. Moreover, graph processing is an emerging type of data analytics that deals with large-scale graph data. Unsuitable for traditional MapReduce, graph analytic algorithms are often written and run with programming models that are specifically designed for graph processing. However, there is an imbalance issue in state-of-the-art graph processing programming model which has drastically affected the performance of graph processing. There is a critical need to revisit the conventional design of graph processing while the volume of real-world useful graph data keeps increasing everyday. Furthermore, although we reveal that a SHMEM-based programming stack helps solve the aforementioned issues, there is still a lack of under- standing about how portable this stack can be for it to fit in with specific data infrastructure and framework being optimized and also other distributed systems in general. This includes to understand the potential performance gain or loss, limitations of usage, and portability on different platforms etc. This dissertation has centered around addressing these research challenges and carried out three studies, each tackling a unique challenge but all focusing on facilitating a SHMEM-based programming stack to enable and accelerate big data services. Firstly, we use a popular SHMEM standard called OpenSHMEM to build a high-performance key-value store called SHMEMCache, which overcomes several issues in enabling direct access to key-value pairs, including race conditions, remote point chasing and unawareness of remote access. We have then thoroughly evaluated SHMEMCache and shown that it has accomplished significant performance improvements over the other contemporary key-value stores, and also achieved good scalability over a thousand nodes on a leadership-class supercomputer. Secondly, to understand the implications in using various SHMEM model and one-sided communication library for big data services, we revisit the design of SHMEMCache and extend it with a portable communication interface and develop Portable- SHMEMCache. Portable-SHMEMCache is able to support a variety of one-sided communication libraries. Based on this new framework, we have supported both OpenSHMEM and MPI-RMA for SHMEMCache as proof-of-concept. We have conducted an extensive experimental analysis to evaluate the performance of Portable-SHMEMCache on two different platforms. Thirdly, we have thoroughly studied the issues existed in state-of-the-art graph processing frameworks. We have proposed salient design features to tackle their serious inefficiency and imbalance issues. The design features have been incorporated in a new graph processing framework called SHMEMGraph. Our comprehensive experiments for SHMEMGraph have demonstrated its significant performance advantages compared to state-of-the-art graph processing frame- works. This dissertation has pushed forward the big data evolution by enabling efficient representative data infrastructure and analytic frameworks on HPC systems with SHMEM-based programming models. The performance improvements compared to state-of-the-art frameworks have demonstrated the efficacy of our solution designs and the potential of leveraging HPC capabilities for big data. We believe that our work has better prepared contemporary data infrastructures and analytic frameworks for addressing the big data challenge.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Computer Science in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Fall Semester 2018.

**NOTE (Date of Defense):**December 6, 2018.

**NOTE (Keywords):**Graph Processing, Key-value Store, One-sided Communication, PGAS, SHMEM

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Weikuan Yu, Professor Directing Dissertation; Ming Ye, University Representative; Zhenhai Duan, Committee Member; Manjunath Gorentla Venkata, Committee Member; Michael Mascagni, Committee Member.

**SUBJECT:**Computer science

**DEGREE:**Doctoral

**Record number: 61**

**FILENAME:**Fu\_fsu\_0071E\_15032.pdf

**TITLE:**Peer Production of Knowledge in Online Social Q&A Communities at Startup Stage

**AUTHOR:**Fu, Hengyi

**MEMBER (Professor Directing Dissertation):**Stvilia, Besiki

**MEMBER (University Representative):**Tang, Xinlin

**MEMBER (Committee Member):**Kazmer, Michelle M.

**MEMBER (Committee Member):**He, Zhe

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Communication and Information

**CORPORATE NAME:**School of Information

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (251 pages)

**ABSTRACT:**As one of the most significant and visible examples of collective intelligence, online peer production communities, such as Wikipedia and Stack Overflow, have become critical to the Web’s knowledge infrastructure. The popularity of these communities has led to a growing body of literature regarding issues of how to encourage commitments and contributions, regulate members’ behavior, or control the quality of community outputs. However, in reality many peer production communities didn’t survive until that stage they need to deal with the above challenges—they never really get off the ground. To build successful online peer production communities, it is essential to have a good understanding of how online peer production communities are self-developed to survive the initial growing pains at startup stage, and how new communities failed, especially comparing to those successful ones. This study employed a mixed methods case study design with content analysis, social network analysis, and semi-structured interviews to examine differences between one successful and one unsuccessful online social Q&A community in the startup stage on Stack Exchange. In particular, the study examined and contrasted the two communities on how they defined their communities’ objectives and scopes; how they recruited, selected, and retained their community members; how they motivated members’ contribution, decided the community structures, and maintained the quality of community outputs. The findings indicated that compared to the failed community Q&A community, the successful Q&A community devoted more efforts to activities of quality assurance, user management, tool development, promotion, and communication between members. It also set clear rules regarding community scope management and user moderation, as well as documented instructions to implement those rules. Besides content creators and moderators, the successful Q&A community had unique user groups who were responsible for quality control, meta-content, and other community supporting work. The successful community also engaged in developing tools for question answering, content editing, searching and browsing, computation, graphic design, program, communication, moderation, and user education. The user network of the successful community was also connected and expanded largely by high-profile users such as moderators and high-reputation content contributors. Implications of this study are twofold. First, it could advance our theoretical understanding of the underlying mechanisms of successful peer production systems (especially theoretical claims of early stage community ecology and developing strategies), for example in mixed scope setting, user selection and recruitment, motivating contributions, etc. This study may also provide practical guidelines to designers of existing peer production communities and those who want to start a new one regarding policy, reputation, incentive system design as well as how socio-technical features could facilitate useful community building activities such as quality assurance, meta-content work, copy-editing, communication, user education, moderation, etc.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the School of Information in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 8, 2019.

**NOTE (Keywords):**community survival, computer supported cooperative work, peer production, social computing, social Q&A, socio-technical systems

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Besiki Stvilia, Professor Directing Dissertation; Xinlin Tang, University Representative; Michelle Kazmer, Committee Member; Zhe He, Committee Member.

**SUBJECT:**Information science

**DEGREE:**Doctoral

**Record number: 62**

**FILENAME:**Galvarino\_fsu\_0071E\_15150.pdf

**TITLE:**Left-Hand Techniques in Aldo Pais' La Tecnica del Violoncello: An Electromyographic Comparison

**AUTHOR:**Galvarino, Jordan Lee

**MEMBER (Professor Directing Treatise):**Sauer, Greg

**MEMBER (University Representative):**Jones, Evan Allan

**MEMBER (Committee Member):**Stillwell, Corinne

**MEMBER (Committee Member):**Thomas, Shannon

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (79 pages)

**ABSTRACT:**The purpose of this treatise is to use surface electromyography (sEMG) in a study with human subjects to compare techniques found in Aldo Pais’ La Tecnica del Violoncello. Statistical research regarding the following exercises found in La Tecnica is provided: compressing the hand (avvicinamenti), enlarged extensions (allargamenti), finger independence, and repetitive motions. Data is recorded from the left extensor digitorum and abductor digiti minimi using sEMG, and each subject’s data is compared to one another, in order to reveal these common trends and outliers. Wearing biosensors, six anonymous participants performed two control exercises and four modified versions of Pais’ exercises that each exhibit a specific technique. Participants also completed a short survey at the conclusion of their session, regarding education level and their experience practicing the examples. There was no correlation between education level and sEMG results. Lowered sEMG results result in improved musical performance, and female participants produced lower microvolt ratings than males in every category. Despite their absence in standard cello pedagogy, avvicinamenti and allargamenti produced significantly lower sEMG results than the exercises of finger independence and repetitive motions. This is an important finding because it removes any assumption that Pais’ techniques should be shunned on the basis that they produce an excess of tension. Including these techniques in standard cello pedagogy would expand upon the fingering possibilities available to cellists in numerous musical contexts.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Treatise submitted to the College of Music in partial fulfillment of the requirements for the degree of Doctor of Music.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 17, 2019.

**NOTE (Keywords):**aldo pais, allargamenti, avvicinamenti, double extensions, electromyography emg, violoncello cello

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Gregory Sauer, Professor Directing Treatise; Evan Allan Jones, University Representative; Corinne Stillwell, Committee Member; Shannon Thomas, Committee Member.

**SUBJECT:**Music

**DEGREE:**Doctoral

**Record number: 63**

**FILENAME:**Gao\_fsu\_0071E\_15162.pdf

**TITLE:**A New Overland Flow Accumulation Algorithm with Enhanced Adaptability for Terrain Surface and Its Application in Distributed Hydrological Modeling

**AUTHOR:**Gao, Xinyu

**MEMBER (Professor Directing Dissertation):**Mesev, Victor

**MEMBER (University Representative):**Coutts, Christopher

**MEMBER (Committee Member):**Yang, Xiaojun, 1965-

**MEMBER (Committee Member):**Zhao, Tingting

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Social Sciences and Public Policy

**CORPORATE NAME:**Department of Geography

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (154 pages)

**ABSTRACT:**The simulation of overland flow accumulation is critical for drainage network extraction, soil moisture monitoring, and hydrological modeling, etc. A variety of flow accumulation algorithms have been developed, but the complex and variable terrain has undermined their predictive accuracy. In my dissertation, a new flow accumulation algorithm (SAPC) is proposed that applies different flow distribution schemes to divergent and convergent flow scenarios with respect to slope, aspect, and plan curvature. Flow accumulation for the divergent scenario is slope-driven in the sense that flow distributed to the downslope neighboring cells is proportional to the slope values, and the weight of slope varies with plan curvature, making the SAPC algorithm adaptable to the variation of terrain surface. For the convergent scenario, flow accumulation is determined by aspect and all the water in the center cell is distributed in the same direction in two dimensions. Comparisons between the SAPC algorithm and the other algorithms show that flow accumulations estimated by the SAPC algorithm are closer to the true values for artificial surfaces, and the generated flow pathways are more balanced and smoother without serious artifacts for natural terrain surfaces. The SAPC algorithm is further integrated into the WetSpa Extension model to simulate hydrological responses at the outlet of the Bull Creek watershed for the 100-year tropical storm Hermine occurring in September 2010. The WetSpa Extension model provides both the semi-distributed and the fully-distributed modeling options. The fully-distributed WetSpa Extension model predicts a higher amount of surface runoff and thus the peak flow approaches more to the observed value than that predicted by the semi-distributed model. Flow accumulation is an important spatial parameter involved in hydrological modeling, and specifically it affects flow routing. Incorporating the SAPC algorithm into the WetSpa Extension model helps to obtain a hydrograph that aligns closer to the observed high flow region and more importantly, the model is able to provide the correct time to peak, otherwise there is half an hour of delay in the time to peak when SAPC algorithm is not used. Statistics demonstrate that the SAPC algorithm enables the WetSpa Extension model to be less biased, more confident and efficient. The significance of this dissertation lies in its provision of the possible ways to enhance the adaptability of flow accumulation algorithm to the varying terrain surfaces, and to improve hydrological modeling results through the more accurate and reliable flow accumulation predictions. This interdisciplinary study, which involves terrain analysis, hydrological modeling, and geographic information science (GIS), stresses the importance of location in describing physical features and processes that is usually the focus of geographical investigation.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Geography in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 29, 2019.

**NOTE (Keywords):**Distributed hydrological modeling, Flow accumulation algorithm, Geographic information science, Python, WetSpa Extension model

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Victor Mesev, Professor Directing Dissertation; Christopher J. Coutts, University Representative; Xiaojun Yang, Committee Member; Tingting Zhao, Committee Member.

**SUBJECT:**Geography

**SUBJECT:**Geographic information systems

**SUBJECT:**Geodesy

**SUBJECT:**Hydrology

**DEGREE:**Doctoral

**Record number: 64**

**FILENAME:**Garris\_fsu\_0071E\_15026.pdf

**TITLE:**Elementary and Special Education Pre-Service Teachers' Self-Efficacy Beliefs about Teaching Mathematics and Science to Students with Autism: A Preliminary Study

**AUTHOR:**Garris, G. Stephen (Gregory Stephen), Jr.

**MEMBER (Professor Directing Dissertation):**Hanline, Mary Frances

**MEMBER (University Representative):**Paek, Insu, (Professor of measurement and statistics)

**MEMBER (Committee Member):**Jakubowski, Elizabeth M.

**MEMBER (Committee Member):**Whalon, Kelly J.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Education

**CORPORATE NAME:**School of Teacher Education

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (211 pages)

**ABSTRACT:**The prevalence rate of autism spectrum disorder (ASD) among school aged children in the US has increased exponentially, compared to estimates from the year 2000. Increased numbers of elementary students with ASD are spending 80% or more of the school day in general education settings, which may pose challenges for both veteran and beginning elementary teachers. Furthermore, there are more rigorous mathematics and science standards that beginning teachers will be responsible for providing instruction to all students, including those with ASD. The transition of mathematics and science standards impacts both elementary teachers and special education teachers because many professional teaching organizations feel both types of instructors should have the proper knowledge in these subject areas for effective instruction. However, there is evidence that both special education and elementary education teachers may not feel efficacious to teach this content. Established and novel survey instruments were administered to a sample of 39 senior pre-service teachers majoring in special education and elementary education, to obtain data related to their field teaching experiences, personal experience interacting with individuals with ASD, and their reported undergraduate coursework. This study was designed to investigate and compare the self-efficacy beliefs of pre-service teachers majoring in special education and elementary education, which was focused on the following context-specific instructional situations: 1) mathematics instruction; 2) science instruction; 3) mathematics instruction to students with ASD; 4) science instruction to students with ASD; and 5) general instructional considerations for teaching students with ASD. Results of the study indicated elementary education pre-service teachers had lower teaching efficacy beliefs in teaching mathematics and science to students with ASD, compared to their mean teaching efficacy scores for the instruction with mathematics and science in general situations. Furthermore, elementary education majors scored significantly lower on teaching mathematics to students with ASD, teaching science to students with ASD, and teaching students with ASD in general, compared to their special education peers in the obtained sample. The new instruments measuring mathematics and science teaching efficacy were determined to have good reliability. Implications for teacher preparation programs and recommendations for future research are discussed.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the School of Teacher Education in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**February 12, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Mary Frances Hanline, Professor Directing Dissertation; Insu Paek, University Representative; Elizabeth M. Jakubowski, Committee Member; Kelly Whalon, Committee Member.

**SUBJECT:**Special education

**SUBJECT:**Education, elementary

**SUBJECT:**Mathematics--Study and teaching

**DEGREE:**Doctoral

**Record number: 65**

**FILENAME:**Gibbes\_fsu\_0071E\_15126.pdf

**TITLE:**The Star-Spangled Consciousness: Musical Theatre Anthems of Unity and the Performance of National Identity

**AUTHOR:**Gibbes, Allison B.

**MEMBER (Professor Directing Dissertation):**Osborne, Elizabeth A., 1977-

**MEMBER (University Representative):**Rogers, Nancy, 1966-

**MEMBER (Committee Member):**Dahl, Mary Karen, 1945-

**MEMBER (Committee Member):**Thomas, Aaron C.

**MEMBER (Committee Member):**Hecht, Stuart J. (Stuart Joel)

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Fine Arts

**CORPORATE NAME:**Department of Theatre

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (177 pages)

**ABSTRACT:**Musical theatre scholars agree that as popular culture, musical theatre has had a profound effect on the development of national identity in the United States. In particular, the genre reaches audiences both inside and outside the theatre through the dissemination of cast recordings, sheet music, and other media. In early incarnations of musical theatre such as the works of George Gershwin and George M. Cohan, musicals typically included overt nationalist anthems designed to inspire and unite the audience in the name of America. With “Oklahoma,” the title song of Rodgers and Hammerstein’s Oklahoma! (1943), and the subsequent Golden Age of musical theatre, the convention of the anthem shifted to express nationalism through the lens of a community within the fictional world of the musical. These anthems serve as models for patriotic unity. In the decades following the Golden Age, some works of musical theatre challenged nationalism, and the anthems in these pieces reflect that sense of questioning. This project considers anthems of unity in musical theatre and the way they formulate identity through musical structures and conventions. I investigate four musical theatre anthems: “Oklahoma” from Oklahoma! (1943), “My Texas” from Giant (2012), “Southern Days” from The Scottsboro Boys (2010), and “Another National Anthem” from Assassins (1991). By analyzing the way that each anthem constructs group identity, I consider the way these constructions speak to national identity within both the musical and the historical context of the original production. Each anthem approaches national identity and nationalism in a different way by using and/or distorting musical conventions that hold cultural meaning in specific time periods. Additionally, I consider the way the anthem functions in conversation with the way the musical constructs history and popular memory, and how these formulations work together to create communities of insiders and outsiders through national identity and nationalism. I argue that each anthem operates dramaturgically, musically, and within a specific historical moment to address and reify or subvert constructions of mainstream national identity. This dissertation asks: what is the role of anthem-singing in US national identity? How does national identity create constructions of belonging and otherness? And how might we reconsider the way musical theatre as a genre is particularly effective site for conversations about the ramifications of othering.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Theatre in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 10, 2019.

**NOTE (Keywords):**musical, national identity, theatre

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Elizabeth A. Osborne, Professor Directing Dissertation; Nancy Rogers, University Representative; Mary Karen Dahl, Committee Member; Aaron C. Thomas, Committee Member; Stuart J. Hecht, Committee Member.

**SUBJECT:**Theater

**SUBJECT:**Music

**SUBJECT:**History

**DEGREE:**Doctoral

**Record number: 66**

**FILENAME:**Gibson\_fsu\_0071E\_15008.pdf

**TITLE:**One Year Later: A Study of the Motivational Profiles of Students Who Participated in a Grit and Growth Mindset Themed First-Year Experience Course at an Urban Community College

**AUTHOR:**Gibson, Kandeice A.

**MEMBER (Professor Directing Dissertation):**Akiba, Motoko

**MEMBER (University Representative):**McDowell, Stephen D., 1958-

**MEMBER (Committee Member):**Khurshid, Ayesha, 1971-

**MEMBER (Committee Member):**Zuilkowski, Stephanie Simmons

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Education

**CORPORATE NAME:**Department of Educational Leadership and Policy Studies

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (132 pages)

**ABSTRACT:**The issue of low community college retention and completion rates has become an important concern in recent years. The lack of persistence among college students has led to a variety of institutional initiatives including first-year experience courses, intrusive advising, and other innovative approaches. Among these approaches, First-Year Experience (FYE) courses are consistently supported as a promising retention strategy. To that end, the purpose of this mixed-method study was to investigate the motivation and first-year experience of students who participated in a Grit and Growth Mindset themed FYE course and persisted beyond the first year. Survey data were collected from 122 students and focus group interviews were conducted with 10 students at a large community college in southeast Florida. The survey data analyses using Independent Samples T-test, ANOVA, and Correlation showed that female students and older students reported a higher level of motivation than male and younger students, but there was no statistically significant difference in their motivation level by race/ethnicity. The focus group interviews revealed that students found three aspects of the FYE course influential to their motivation: (1) short-term and long-term goal setting, (2) self-reflection, and (3) support and resources. They also reported that time management strategies and supports from professors, peers, and family helped them overcome their challenges associated with balancing jobs and coursework, as well as anxiety and nervousness about their ability to complete college. An important implication of this study is for community colleges to continue emphasizing FYE courses to ensure that incoming students feel confident about their ability to achieve success during the first year and persist by overcoming obstacles. In addition, colleges should continue to equip students with practical tools and resources, such as time-management and the SMART goal framework, that support their competence and autonomy in charting their path to success.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Educational Leadership and Policy Studies in partial fulfillment of the requirements for the degree of Doctor of Education.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 14, 2019.

**NOTE (Keywords):**Community Colleges, First-Year Experience, Grit, Growth Mindset, Motivation, Retention

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Motoko Akiba, Professor Directing Dissertation; Stephen D. McDowell, University Representative; Ayesha Khurshid, Committee Member; Stephanie Simmons Zuilkowski, Committee Member.

**SUBJECT:**Education, Higher

**SUBJECT:**Educational leadership

**SUBJECT:**School management and organization

**DEGREE:**Doctoral

**Record number: 67**

**FILENAME:**Gilanifar\_fsu\_0071E\_15164.pdf

**TITLE:**Heterogeneous Data Fusion for Performance Improvement in Electric Power Systems

**AUTHOR:**Gilanifar, Mostafa

**MEMBER (Professor Directing Dissertation):**Wang, Hui

**MEMBER (University Representative):**Moses, Ren

**MEMBER (Committee Member):**Ozguven, Eren Erman

**MEMBER (Committee Member):**Park, Chiwoo

**MEMBER (Committee Member):**Vanli, Omer Arda

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**FAMU-FSU College of Engineering

**CORPORATE NAME:**Department of Industrial and Manufacturing Engineering

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (153 pages)

**ABSTRACT:**The performance of the electric power system determines the cost-effective and reliable energy supply to maintain operations in a city. Electric power system performance improvement is important for utility companies in different aspects from maintenance and reliability to the environment. In a modern city, new monitoring devices are deployed to collect data in the electric power system and other city systems such as transportation. The heterogeneous data collected by new monitoring devices reveal the multi-community interactions in the electric power system and also reveal the interdependencies between different city systems such as electric power system and transportation system. This dissertation research studied the development of data fusion and multi-task learning algorithms in improving short-term load forecasting, fault detection, and rare faulty event detection by leveraging heterogeneous and multi-community data. The theoretical contribution of this study lies in the method selection and comparison for fusing transportation and electricity consumption data, and new methods of capturing between-community relatedness in guiding the knowledge transfer for the learning of Bayesian spatiotemporal Gaussian Process model, fault classification, and semi-supervised learning so that the performance of these algorithms are not limited by the specificity in the dataset and can reduce overfitting issues. The first study aims to forecast the electric load consumption and traffic counts accurately which benefits from the data fusion techniques in order to fill the lack of sufficient data. Accurate forecasting is mostly dependent on sufficient and reliable data. Traditional data collection methods may be necessary but not sufficient due to their limited coverage and expensive cost of implementation and maintenance. The advances in sensor networks and recent technological developments emerge a new opportunity. Specifically, data fusion tools can be used for improving the limited resolution in the data due to limitations on time frame, cost, accuracy, and reliability. In this study, a Bayesian spatiotemporal Gaussian Process model is proposed which employs the most informative spatiotemporal interdependency among its system, and covariates from other city systems. Results obtained from real-world data from the City of Tallahassee in Florida show that the multi-network data fusion framework improves the accuracy of load forecasting, and the proposed model outperforms all the existing methods. The second study is conducted for short-term electricity load forecasting for a residential community in a city which suffers from low-resolution data. Historically, extensive research has been conducted to improve the load forecasting accuracy using single-task machine learning methods, which rely on the information from one single data source. Such methods have limitations with low-resolution data from meters. Fusing the electricity consumption data from multiple communities can improve forecasting accuracy. Recently, an emerging family of machine learning algorithms, multi-task learning (MTL), have been developed and can be utilized for short-term load forecasting. However, appropriate modeling of the relatedness to enable the between-community knowledge transfer remains a challenge. This research proposes an improved MTL algorithm for a Bayesian spatiotemporal Gaussian process model (BSGP) to characterize the relatedness among the different communities in a city. It hypothesizes on the similar impacts of environmental and traffic conditions on electricity consumption in improving the accuracy of short-term electricity load forecasting. Furthermore, this study proposes a low ranked dirty model along with an iterative algorithm to improve the learning of model parameters under an MTL framework. This study used real-world data from two residential communities to demonstrate the proposed method through comparison with state-of-the-art methods. The third study investigates the fault (type) detection in power distribution systems by using the Distribution Phasor Measurement Unit (D-PMU) data. Historically, Traveling-wave and impedance-based methods are among the most notable fault detection techniques. The disadvantage of the impedance methods is that they rely on the knowledge of the network components characteristics. Although Traveling-wave methods have shown to be accurate, they require high-frequency measurements for reliable performance. Such high-resolution measurement data is expensive and may not be available all the times. More recently, D-PMU devices are used to observe better, record, and provide high-resolution voltage and current phasor measurements. In this study, a Multi-task Logistic Low-Ranked Dirty Model (MT-LLRDM) for fault detection is proposed to improve the accuracy by utilizing the similarities in the fault data streams among multiple locations across a power distribution network. The captured similarities supplement the information to the task of fault detection at a location of interest, creating a multi-task learning framework and thereby improving the learning accuracy. The algorithm is validated with real-time D-PMU streams from a hardware-in-the-loop testbed that emulates real field communication and monitoring conditions in distribution networks. Finally, a study is conducted for the fault (type) detection in power distribution systems when data suffers from the lack of labeled data. Supervised multi-task learning methods have limitations when there are a lot of missing data in the target domain especially records on fault data are lacking label. Labeled fault data can be very limited in the target community since fault data labeling is very time-consuming. Therefore, in this study, a multi-task semi-supervised learning method is proposed to simultaneously explore the latent structure in the unlabeled data to learn the labels and leverage the data from multiple locations in the power systems to improve the fault detection.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Industrial and Manufacturing Engineering in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 15, 2019.

**NOTE (Keywords):**Data Fusion, Electric Power Systems, Multi-task Learning

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Hui Wang, Professor Directing Dissertation; Ren Moses, University Representative; Eren Erman Ozguven, Committee Member; Chiwoo Park, Committee Member; Omer Arda Vanli, Committee Member.

**SUBJECT:**Industrial engineering

**SUBJECT:**Electrical engineering

**DEGREE:**Doctoral

**Record number: 68**

**FILENAME:**Gilchrist\_fsu\_0071N\_15103.pdf

**TITLE:**Mississippi a Novel

**AUTHOR:**Gilchrist, Whitney M.

**MEMBER (Professor Directing Thesis):**Stuckey-French, Elizabeth

**MEMBER (Committee Member):**Howard, Ravi

**MEMBER (Committee Member):**Roberts, Diane, 1959-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of English

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (195 pages)

**ABSTRACT:**This novel takes place during Thanksgiving week of 2018 and follows Georgia McLachlan, a millennial and history teacher living in Brooklyn. When her brother stops returning her and her parents’ calls, her parents’ distress persuades her to return her home state of Mississippi for the holiday week. While they reach dead ends messaging the brother’s friends and looking for clues to his whereabouts in financial records, the visit becomes not just about finding her brother, but also about Georgia confronting her home state’s past, and how that shapes who her parents are. In the course of the week, she travels across the state, visiting relatives and sleeping with strangers she meets in bars from the Gulf coast to the capital, Jackson. Georgia finds a that white Mississippi has grown even more obsessed with its past and with perpetuating a culture rooted in the nuclear family, and she draw parallels between the problems she has with her family, and those between Mississippi and the United States.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Thesis submitted to the Department of English in partial fulfillment of the requirements for the degree of Master of Fine Arts.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 3, 2019.

**NOTE (Keywords):**family, home, millennials, Mississippi, southern history, southern literature

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Elizabeth Stuckey-French, Professor Directing Thesis; Ravi Howard, Committee Member; Diane Roberts, Committee Member.

**DEGREE:**Masters

**Record number: 69**

**FILENAME:**Givens\_fsu\_0071N\_15219.pdf

**TITLE:**Performing Asexy: Asexual Identity and Neo-Burlesque in Mississippi, Texas, and Florida

**AUTHOR:**Givens, Sarah

**MEMBER (Professor Directing Thesis):**Schwadron, Hannah

**MEMBER (Committee Member):**Atkins, Jennifer

**MEMBER (Committee Member):**Goldman, Ilana

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Fine Arts

**CORPORATE NAME:**School of Dance

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (99 pages)

**ABSTRACT:**This Masters in American Dance Studies thesis addresses the performance of asexual identity in the neo-burlesque performance art. With a heavy emphasis on autoethnography, I present neo-burlesque as a genre that creates space for queer identity performance. I focus on three case studies: First, as a live audience member, I examine Hattiesburlesque as an example of neo-burlesque’s celebratory and self-loving spirit. Then, through online engagement, I analyze the work of genderqueer, asexual neo-burlesque performer Hana Li and her involvement in the queerlesque community of Dallas, Texas. Finally, as a performing member of Shaken Not Stirred Burlesque, I explore a self-choreographed solo routine celebrating asexual pride in order to gain embodied experience of performing identity in neo-burlesque. In doing so, I add to the sparse but growing field of asexual research and depart on a personal journey of self-discovery and self-expression.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the School of Dance in partial fulfillment of the requirements for the degree of Master of Arts.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 10, 2019.

**NOTE (Keywords):**asexuality, autoethnography, burlesque, identity, neo-burlesque, performance

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Hannah Schwadron, Professor Directing Thesis; Jen Atkins, Committee Member; Ilana Goldman, Committee Member.

**SUBJECT:**Dance

**DEGREE:**Masters

**Record number: 70**

**FILENAME:**Graves\_fsu\_0071E\_14974.pdf

**TITLE:**Understanding Volunteer Motivation and Retention in an Art Museum

**AUTHOR:**Graves, Sarah Copeland Gladwin

**MEMBER (Professor Directing Dissertation):**Villeneuve, Pat, 1955-

**MEMBER (University Representative):**Rutledge, Stacey A.

**MEMBER (Committee Member):**Broome, Jeff

**MEMBER (Committee Member):**Love, Ann Rowson, 1967-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Fine Arts

**CORPORATE NAME:**Department of Art Education

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (168 pages)

**ABSTRACT:**There are several motivating and satisfying factors that affect volunteer retention. Organizations need to know what these factors are in order to make the volunteer’s role more satisfying and therefore improve rates of retention. The purpose of this phenomenological case study was to explore the motivation factors for volunteers in an art museum setting, in particular the individual motivations for remaining at an organization for a period of time not less than one year, using Herzberg’s Two-Factor Theory (Herzberg, Mausner, and Snyderman, 1959). The research includes an extensive literature review examining motivation theories, factors of retention and volunteering, and aspects of phenomenology. The population of this study consisted of 28 volunteers in one art museum, the Montgomery Museum of Fine Arts in Montgomery, Alabama. The museum represented an organization with an established and successful volunteer program. The participants were adults who were free-choice volunteers, or volunteers who were not required to provide service for any other reason other than their own choice. Data were collected through an online survey and in-person interviews. A statistical test with a chi-square was used to determine the relationship between volunteer retention and factors of motivation. The following factors were found to be significant in volunteer satisfaction and motivation: engagement and enrichment opportunities, a personal sense of doing something worthwhile, and enjoyment of the work itself. Of those factors, it was found that engagement and enrichment opportunities had the highest impact on volunteer retention. It was concluded that (1) there are several motivation factors for volunteers; (2) there is one motivation factor that also has a significant relationship with volunteer retention; and (3) volunteer motivation factors can also serve as factors for dissatisfaction and negatively impact retention.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Art Education in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**February 18, 2019.

**NOTE (Keywords):**Administration, Art, Motivation, Museum, Retention, Volunteer

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Pat Villeneuve, Professor Directing Dissertation; Stacey Rutledge, University Representative; Jeff Broome, Committee Member; Ann Rowson Love, Committee Member.

**SUBJECT:**Museums

**SUBJECT:**Study and teaching

**SUBJECT:**Arts--Management

**SUBJECT:**Art--Study and teaching

**DEGREE:**Doctoral

**Record number: 71**

**FILENAME:**Gray\_fsu\_0071E\_15148.pdf

**TITLE:**The Causes and Consequences of Being Reminded

**AUTHOR:**Gray, Nicholas Daniel

**MEMBER (Professor Directing Dissertation):**Kelley, Colleen M.

**MEMBER (University Representative):**Sunderman, Gretchen L.

**MEMBER (Committee Member):**Boot, Walter Richard

**MEMBER (Committee Member):**Johnson, Frank, (Professor of Psychology)

**MEMBER (Committee Member):**Kaschak, Michael P.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Psychology

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (78 pages)

**ABSTRACT:**Surprisingly little research has examined the phenomenon of being reminded, or having a prior experience come to mind during a current, related experience. Remindings are a regular occurrence in daily life and they can be beneficial for maintaining memories of both the item that one is being reminded of and the item triggering the reminding. In situations where interference would be expected to occur between similar memories, reminding can not only protect against interference, but it can also create facilitation of memory. I discuss research detailing the impact of reminding as well as the limited research done to understand what influences rates of reminding. In a series of four experiments I probe these influences, revealing a significant impact of word frequency, context variability, and imageability on rates of reminding. Alternatively, animacy and distinctiveness were not found to impact reminding in the current A-B, A-D paradigm.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Psychology in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 17, 2019.

**NOTE (Keywords):**Context Variability, Facilitation, Frequency, Interference, Memory, Reminding

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Colleen M. Kelley, Professor Directing Dissertation; Gretchen L. Sunderman, University Representative; Walter Richard Boot, Committee Member; J. Frank Johnson, Committee Member; Michael P. Kaschak, Committee Member.

**SUBJECT:**Cognitive psychology

**DEGREE:**Doctoral

**Record number: 72**

**FILENAME:**Greenwood\_fsu\_0071E\_15121.pdf

**TITLE:**Novel Sites of Oxytocin Receptor Expression in the Mouse Periphery and Modulation of Pupillary Behavior by Oxytocin

**AUTHOR:**Greenwood, Maria Anjelica

**MEMBER (Professor Directing Dissertation):**Hammock, Elizabeth Anne Dunn

**MEMBER (University Representative):**Liu, Xiuwen, -1966

**MEMBER (Committee Member):**Boot, Walter Richard

**MEMBER (Committee Member):**Fadool, James M.

**MEMBER (Committee Member):**Johnson, Frank, (Professor of Psychology)

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Psychology

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (92 pages)

**ABSTRACT:**Oxytocin (OXT) is a peptide with important regulatory roles in both physiological and behavioral contexts. OXT binds to the OXT receptor (OXTR) in the central and peripheral nervous systems, with diverse patterns of expression dependent on many variables including but not limited to species, sex, and stage of development. OXT is an important hormone during adulthood for the transition to parenthood in many species, from mating behaviors through parturition all the way to parental care. OXT signaling in the parent is crucial during these stages, and deficits in parental OXT can have persisting developmental consequences for the offspring. However, less research has investigated how the infant processes OXT-mediated parental care. The aims of this research were to assess peripheral sites of OXTR in the infant that may inform how the infant perceives OXT from the environment. This cross-species analysis sought to identify regions that were conserved among species and identify differences in OXTR expression that may correlate with developmental behaviors. A novel site of OXTR-binding, the eye, was further assessed in neonates and adults for the presence of mRNA that could potentially inform synthesis and function. Finally, a battery of behavioral tasks to assess differences in pupillary responsiveness were performed in adult transgenic mice strains of Oxt and Oxtr wild-type and knockout. Results from OXTR autoradiography indicated several sites of specific binding in the mouse, prairie vole, and rat. There were species and strain differences in regions of interest including the periodontium and the ciliary bodies of the eye. OXTR autoradiography in adult mice demonstrated that OXTR in the ciliary bodies persist into adulthood. Oxtr mRNA was detected by in situ hybridization (ISH) in the neonatal mouse eye and by reverse-transcriptase polymerase chain reaction (RT-PCR) in the adult mouse eye. Regions relevant to pupillary modulation and processing sensory information from the eye displayed robust Oxtr signal by ISH, including the conjunctiva, ciliary bodies, ciliary ganglion, oculomotor nerve, and superior cervical ganglion. Behavioral assessments in adult mice demonstrated a significantly constricted baseline pupil diameter in Oxt knockout mice, which is rescued by the topical application of OXT. These data support a potential role for OXT mediating autonomic development in the visual system.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Psychology in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 5, 2019.

**NOTE (Keywords):**Cross-species, Knockout, Mouse, Oxytocin, Pupil

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Elizabeth A. D. Hammock, Professor Directing Dissertation; Xiuwen Liu, University Representative; Walter Richard Boot, Committee Member; James M. Fadool, Committee Member; Frank Johnson, Committee Member.

**SUBJECT:**Neurosciences

**SUBJECT:**Neurosciences

**SUBJECT:**Psychobiology

**DEGREE:**Doctoral

**Record number: 73**

**FILENAME:**Groves\_fsu\_0071N\_15220.pdf

**TITLE:**Working Memory and Emotion Regulation in ADHD

**AUTHOR:**Groves, Nicole B. (Nicole Beth)

**MEMBER (Professor Directing Thesis):**Kofler, Michael J.

**MEMBER (Committee Member):**Ganley, Colleen M.

**MEMBER (Committee Member):**Kistner, Janet

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Psychology

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (58 pages)

**ABSTRACT:**Emotion regulation difficulties are present in many, if not most, children with attention-deficit/hyperactivity disorder (ADHD) and confer risk for a host of adverse outcomes. Little is known, however, regarding the neurocognitive and behavioral mechanisms that underlie these difficulties. A well-characterized, clinically evaluated sample of 145 children ages 8-13 years (M=10.33, SD=1.47; 55 girls; 69% White/non-Hispanic) were administered multiple, counterbalanced working memory tests and assessed for emotion dysregulation and ADHD symptoms via multiple-informant reports. Bias-corrected, bootstrapped conditional effects modeling indicated that underdeveloped working memory exerted significant indirect effects on emotion regulation via ADHD-related hyperactive/impulsive symptoms in all tested models (all 95% CIs excluded zero). Interestingly, hyperactive/impulsive symptoms also predicted emotion dysregulation when controlling for the influence of working memory. Inattention failed to predict emotion regulation difficulties in all tested models (all 95% CIs included zero). This pattern of results replicated across parent and teacher models and were robust to control for mono-informant bias. These findings suggest that emotion dysregulation in ADHD reflects, in part, an affective outcome of hyperactive and/or impulsive symptomatology, both attributable to and independent of the role of underlying working memory deficits.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Thesis submitted to the Department of Psychology in partial fulfillment of the requirements for the degree of Master of Science.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 11, 2019.

**NOTE (Keywords):**Attention-Deficit/Hyperactivity Disorder, Emotion Regulation, Working Memory

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Michael Kofler, Professor Directing Thesis; Colleen Ganley, Committee Member; Janet Kistner, Committee Member.

**SUBJECT:**Clinical psychology

**DEGREE:**Masters

**Record number: 74**

**FILENAME:**Hagen\_fsu\_0071E\_15035.pdf

**TITLE:**Development of New Generation Hybrid Lithium-Ion Battery Capacitor Energy Storage Devices

**AUTHOR:**Hagen, Mark A. (Mark Andrew)

**MEMBER (Professor Directing Dissertation):**Zheng, Jianping

**MEMBER (University Representative):**Shih, Chiang

**MEMBER (Committee Member):**Andrei, Petru P.

**MEMBER (Committee Member):**Foo, Simon Y.

**MEMBER (Committee Member):**Li, Hui, 1970-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**FAMU-FSU College of Engineering

**CORPORATE NAME:**Department of Electrical and Computer Engineering

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (105 pages)

**ABSTRACT:**As the energy demand grows so to do the need for devices that can be tailored to a design need. Often, this can lead to a device that falls between the two traditional groups of lithium-ion battery (LIB) and lithium-ion capacitors (LIC). An emerging way to bring these devices together is using composite cathodes. Composite cathodes combine a battery material with capacitor material and have shown to be able to enhance life cycle energy and power performance compared to their non-composite counterparts. The initial focus of the investigation is into the performance impact of LiNi0.5Co0.2Mn0.3O2 (NMC) as an additive to Activated Carbon (AC) electrodes within a high-performance Li-ion capacitor fabricated with activated carbon positive electrodes (PEs) and hard carbon negative electrodes (NEs) having lithium thin film as Li sources loaded on the surface of the negative electrodes. We report here on a hybrid LIC consisting of a Lithium nickel cobalt manganese oxide /activated carbon composite cathode in combination with an ultra-thin lithium film (u-Li) pre-loaded hard carbon anode. Additionally, we show that by utilizing three design approaches: dry composite electrode fabrication method, cathode to anode capacity ratio design, and pre-lithiation method using u-Li, we can demonstrate an energy storage device with excellent cycle life, and that can be tailored by composite ratios within the cathode to fit different applications. Shown here is an in-depth look at various composite material ratios, pre-lithiation calculations, and hybrid lithium-ion battery-capacitor energy storage device creation based on targeting essential energy-power performance characteristics.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Electrical and Computer Engineering in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 17, 2019.

**NOTE (Keywords):**cycle life, dry method composite hybrid cathode, Hybrid Li-ion battery-capacitor, lithium nickel cobalt manganese oxide, pre-lithiation, Ragone plots

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Jim P. Zheng, Professor Directing Dissertation; Chiang Shih, University Representative; Petru Andrei, Committee Member; Simon Y. Foo, Committee Member; Hui Li, Committee Member.

**SUBJECT:**Force and energy

**DEGREE:**Doctoral

**Record number: 75**

**FILENAME:**Haider\_fsu\_0071E\_14971.pdf

**TITLE:**Development, Validation, and Use of an Assessment of Learning Outcomes in Introductory Linear Algebra Classes

**AUTHOR:**Haider, Muhammad Qadeer

**MEMBER (Professor Directing Dissertation):**Larson, Christine (Christine J.)

**MEMBER (University Representative):**Ökten, Giray

**MEMBER (Committee Member):**Whitacre, Ian Michael

**MEMBER (Committee Member):**Almond, Russell G.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Education

**CORPORATE NAME:**School of Teacher Education

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2018

**PHYSICAL DESCRIPTION:**1 online resource (94 pages)

**ABSTRACT:**Inquiry-oriented teaching is a specific form of active learning gaining popularity in teaching communities. The goal of inquiry-oriented classes is to help students in gaining a conceptual understanding of the material. My research focus is to gauge students’ performance and conceptual understanding in inquiry-oriented linear algebra classes. This work is part of a broader NSF funded project; Teaching Inquiry-Oriented Mathematics: Establishing Support (TIMES) (Grant # 1431393), and TIMES project was designed to support instructors to shift towards inquiry-oriented instruction/teaching. Being part of the TIMES team, a broader goal of my dissertation is pragmatic to the project that is to measure the effectiveness of inquiry-oriented teaching on students learning of linear algebra concepts. Through my research, my contribution to math education field is the development of a valid and reliable assessment instrument for instructors teaching linear algebra concepts in their classes. My dissertation is a mixed method research and follows a three-paper format, and in these papers I discuss (1) the development and validation of a reliable linear algebra assessment tool, (2) comparison of performance of students in inquiry-oriented classes with the students in non-inquiry-oriented classes by using the tool developed in the first paper, and (3) development of research-based choices and distractors to convert the current open-ended assessment into a multiple-choice test by looking into students’ ways of reasoning and problem-solving approaches. The first paper is a quantitative study in which I establish the validity of the linear algebra assessment, and I also measure the reliability of the assessment. In the second paper, I use the linear algebra assessment to measure students’ conceptual and procedural understanding of linear algebra concepts and to compare the performance of students in inquiry-oriented classes with the students in non-inquiry-oriented classes. In the final paper, I focus on the analysis of patterns in student responses, particularly to open-ended response items, to inform the multiple-choices and distractors for the open-ended questions on the linear algebra assessment. This analysis will help me to convert the existing linear algebra assessment into a multiple-choice format research tool that linear algebra researchers can use for various comparisons to gauge the effectiveness of interventions. Additionally, the multiple-choice format of the assessment will be easy to administer and grade, so instructors can also use the assessment to measure their students’ conceptual and procedural understanding of linear algebra concepts.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the School of Teacher Education in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Fall Semester 2018.

**NOTE (Date of Defense):**October 18, 2018.

**NOTE (Keywords):**Assessment Validation, Inquiry-Oriented Teaching, Linear Algebra

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Christine Andrews-Larson, Professor Directing Dissertation; Giray Okten, University Representative; Ian Whitacre, Committee Member; Russell Almond, Committee Member.

**SUBJECT:**Mathematics--Study and teaching

**DEGREE:**Doctoral

**Record number: 76**

**FILENAME:**Hampton\_fsu\_0071E\_15157.pdf

**TITLE:**Education as Feminism for Nontraditional Aged Women Receiving Pell Grants

**AUTHOR:**Hampton, Amber E. (Amber Edwina)

**MEMBER (Professor Directing Dissertation):**Perez-Felkner, Lara

**MEMBER (University Representative):**Padavic, Irene

**MEMBER (Committee Member):**Jones, Tamara Bertrand

**MEMBER (Committee Member):**Mokher, Christine

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Education

**CORPORATE NAME:**Department of Educational Leadership and Policy Studies

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (126 pages)

**ABSTRACT:**This study centers the experiences of nontraditional aged women who are 24 or older and the usefulness of Pell Grant funding to increase outcomes for attainment at the certificate, bachelor’s, and associate’s degree level in higher education. Critical feminist policy analysis guided the research structure, centering of women, and recommendations for policy guided by the results of the research. Using data from the Beginning Postsecondary Students Longitudinal Survey 2004/09, a secondary data analysis was completed to better understand factors influencing attainment, particularly for nontraditional age women. Through the use of descriptive statistics, ordered and multinomial logistic regression, and estimations of predicted probabilities, it was found that nontraditional students have less favorable outcomes for attainment, compared to traditional 18-23 year old students. Women and those receiving Pell Grant funds totaling $18,000 and above, however, had higher attainment outcomes compared to men and those with lower Pell Grant amounts, making a case for the merits of protecting and retaining federal aid funding to enhance low-income, nontraditional aged women’s chances of completing postsecondary degrees.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Educational Leadership and Policy Studies in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 16, 2019.

**NOTE (Keywords):**Feminism, Financial Aid, Higher Education, Pell Grant, Public Policy, Women in Higher Education

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Lara Perez-Felkner, Professor Directing Dissertation; Irene Padavic, University Representative; Tamara Bertrand Jones, Committee Member; Christine Mokher, Committee Member.

**SUBJECT:**Education, Higher

**SUBJECT:**Public policy

**SUBJECT:**Women's studies

**DEGREE:**Doctoral

**Record number: 77**

**FILENAME:**Heo\_fsu\_0071N\_15217.pdf

**TITLE:**Witness for 8 Instruments

**AUTHOR:**Heo, Wan

**MEMBER (Professor Directing Thesis):**Callender, Clifton

**MEMBER (Committee Member):**Jones, Evan Allan

**MEMBER (Committee Member):**Sung, Benjamin

**MEMBER (Committee Member):**Wingate, Mark

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (39 pages)

**ABSTRACT:**Witness is about animals’ affliction due to humans’ indiscriminate abuse of them. The first movement is composed after seeing a photo of a 25-year old rhino who was butchered her horns by poachers; it was not only a disaster to a rhino and her family, but also to people who interacted with her and loved her. I took a sound that I felt is similar as wailing animals— superball scraping on the bass drum skin— as a motive and tried to orchestrate the sound in different ways so that the motive is heard throughout the movement. I aimed to depict the agitation and confusion that I felt when I encountered the photo in the second movement; irregular rhythm and the fragments of sounds that are produced by different instruments in a random order are used. Finally, in the third movement, I wanted to remind the audience the importance of living with our nature (not only use them,) its beauty, and vulnerability caused by human’s consistent use of it— whistle tone on flute, multiphonics and air noise on clarinets, pitch bending on vibraphone, and harmonics on strings were used in the movement.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the College of Music in partial fulfillment of the requirements for the degree of Master of Music.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 17, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Clifton Callender, Professor Directing Thesis; Evan Allen Jones, Committee Member; Benjamin Sung, Committee Member; Mark Wingate, Committee Member.

**DEGREE:**Masters

**Record number: 78**

**FILENAME:**Herman\_fsu\_0071N\_15222.pdf

**TITLE:**The Relationship between Lexical Coverage and Levels of Reading Comprehension: Extensive Reading of Graded Readers by L2 Spanish Beginners

**AUTHOR:**Herman, Eric Donald

**MEMBER (Professor Directing Thesis):**Leeser, Michael J.

**MEMBER (Committee Member):**Muntendam, Antje

**MEMBER (Committee Member):**Sunderman, Gretchen L.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Modern Languages and Linguistics

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (125 pages)

**ABSTRACT:**The process of reading consists of the interaction of many subcomponent processes that transpire between perception of the letters on the page and the building of an interpretation of the text. Essential to comprehension is the ability to access the context-specific meanings of words. Thus, one line of second language (L2) reading research has examined the relationship between the percentage of known words in a text (i.e., lexical coverage) and reading comprehension. Overall, studies in this vein have found that if second language readers report knowing 95-98% of the words in a text, their comprehension is nearly the same as it would be if they knew 100% of the words (e.g., Hu & Nation; 2000; Schmitt, Jiang, & Grabe, 2011). This lexical coverage figure is recommended for extensive reading, but the reading conditions of the existing studies may not be generalizable to this type of reading, nor has the vocabulary-comprehension relationship been studied with beginner L2 language learners. Moreover, comprehension is not a unitary construct. Theories of comprehension posit multiple levels of representation (Kintsch & van Dijk, 1978; Kintsch & Kintsch, 2005). Therefore, this thesis reports on a study (N = 44) that looked at how lexical coverage relates to the construction of a literal representation of the text (i.e., textbase) and the reader’s mental model of the situation (i.e., situation model). Because a primary purpose of extensive reading being enjoyment, this study also investigated how lexical coverage and comprehension relate to the enjoyment experienced by beginning L2 Spanish learners when reading under conditions more like those desired for extensive reading (Day and Bamford, 2002). In this study, a yes/no vocabulary test was used to measure knowledge of all the words in the texts. Comprehension was first measured productively by means of a cued written recall (CWR), followed by a multiple-choice question (MCQ) test. Both comprehension measures focused on the ten main events identified by four advanced Spanish speakers, and for each main event there was a literal and an inferential question. The results demonstrated a moderate to strong relationship between lexical coverage and comprehension. Participants with 90-94% lexical coverage outperformed the 85-89% lexical coverage group on all measures of comprehension. However, there was a lot of variation in comprehension among readers with 90-94% lexical coverage and they, on average, only comprehended half of the main events. In general, inferential questions were of equal or greater difficulty than literal questions. There was a small to medium effect for the relationship between enjoyment and overall CWR test scores, as well as between enjoyment and perceived comprehension. The significance of these findings for textbase and situation model construction, as well as pedagogical implications are discussed.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the Department of Modern Languages and Linguistics in partial fulfillment of the requirements for the degree of Master of Arts.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 19, 2019.

**NOTE (Keywords):**extensive reading, lexical coverage, reading comprehension, second language acquisition, vocabulary

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Michael J. Leeser, Professor Directing Thesis; Antje Muntendam, Committee Member; Gretchen Sunderman, Committee Member.

**SUBJECT:**Linguistics

**SUBJECT:**Education, Bilingual

**DEGREE:**Masters

**Record number: 79**

**FILENAME:**Hethcox\_fsu\_0071N\_15190.pdf

**TITLE:**An Examination of Accessibility at the College of Music at a Large Southeastern University

**AUTHOR:**Hethcox, Jessica

**MEMBER (Professor Directing Thesis):**Darrow, Alice-Ann

**MEMBER (Committee Member):**Standley, Jayne M.

**MEMBER (Committee Member):**Gooding, Lori F. (Lori Fogus)

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (54 pages)

**ABSTRACT:**The purpose of this study was to examine the accessibility of music concerts and venues at a College of Music at a large Southeastern university. The secondary purpose of the study was to investigate whether accessibility affects participants’ attendance at College of Music events. Members of a patron organization who are frequent attendees at College of Music events served as participants (N=48). Participants completed a questionnaire that included 16 items related to (a) participants’ demographic information, (b) the accessibility of halls at the College of Music for people with physical disabilities, hearing loss, and vision loss, (c) accessibility of the box office and parking, and, (d) how accessibility affects participants’ concert attendance. Results indicated the majority of participants reported the halls at the College of Music were accessible for people with physical disabilities, hearing loss, and vision loss. Other findings were: (1) parking is the greatest challenge for participants when attending College of Music events, (2) the concert box office for purchasing tickets is accessible, (3) participants do not research information on accessibility before events; therefore, have little knowledge that accessibility information is available, (4) accessibility does not affect participants’ attendance at College of Music events; however, parking and accessibility of the drop off area for some halls discourages them from bringing older family members and friends for whom walking any distance is a challenge. These findings indicate participants perceive the College of Music’s accessibility efforts positively regarding their concert attendance.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the College of Music in partial fulfillment of the requirements for the degree of Master of Music.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 15, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Alice-Ann Darrow, Professor Directing Thesis; Jayne Standley, Committee Member; Lori Gooding, Committee Member.

**DEGREE:**Masters

**Record number: 80**

**FILENAME:**Hilgren\_fsu\_0071N\_15127.pdf

**TITLE:**The Music of Science: Environmentalist Data Sonifications, Interdisciplinary Art, and the Narrative of Climate Change

**AUTHOR:**Hilgren, Bailey

**MEMBER (Committee Member):**Eyerly, Sarah

**MEMBER (Committee Member):**Broyles, Michael, 1939-

**MEMBER (Committee Member):**Chagnon, Jeffrey M.

**MEMBER (Professor Directing Thesis):**Von Glahn, Denise, 1950-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (134 pages)

**ABSTRACT:**The current environmental crisis is due at least in part to a lack of effective science communication. Traditional methods of disseminating findings are important for continued progress but can be inaccessible to the public and rarely communicate the important emotional and cultural dimensions of environmental issues. Mitigation of the effects of climate change will not occur if a majority of people cannot understand the problem or do understand but fail to change their behaviors. There has been significant communications research into these issues—findings have suggested that communication techniques that can create a narrative, engage emotion, make the abstract more understandable, and use value frames to connect to an audience and encourage empathy will be most effective in encouraging behavioral change. The arts are capable of communicating in this fashion; sounding art in particular has a long history of engaging with politicized and emotional issues in ways that can ultimately provoke large-scale shifts in social convention. The arts and sciences each provide important responses to environmental problems. When used together, however, they have serious potential to create change. Data sonification, or the translation of data into sound, combines climate science and ecological art into a potentially powerful form of environmental activism. This thesis research examines the technique’s blend of art and science and its potential as effective environmentalist art through an exploration of three case studies: Lauren Oakes and Nik Sawe’s 2016 sonification of climate change impacts on Alaskan forests, Andrea Polli’s 2004 online sonification project Heat and the Heartbeat of the City, and the 2012 telematic multimedia opera Auksalaq by Matthew Burtner and Scott Deal. Data sonifications defy classification as either solely artistic or scientific—this disciplinary ambiguity can create tension—but it is exactly this disciplinary ambiguity that makes them useful as environmentalist tools. Sonifications appeal to emotions and logic and require creativity and evidence, powerful persuasive combinations in the face of environmental issues. They require scientists to consider the aesthetics behind the art, and composers to understand the science behind the data; in forcing us to acknowledge the importance of the other disciplinary perspective, they help us to question some of our disciplinary boundaries and effectively serve as a model for the interdisciplinary collaboration that is increasingly necessary as we navigate our changing world.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the College of Music in partial fulfillment of the requirements for the degree of Master of Music.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 29, 2019.

**NOTE (Keywords):**Climate Change, Data Sonification, Ecological Art, Environmental Sustainability, Interdisciplinary Art, Science Communication

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Denise Von Glahn, Professor Directing Thesis; Sarah Eyerly, Committee Member; Michael Broyles, Committee Member; Jeffrey Chagnon, Committee Member.

**SUBJECT:**Music

**SUBJECT:**Climatic changes

**SUBJECT:**Sustainability

**DEGREE:**Masters

**Record number: 81**

**FILENAME:**Hollingsworth\_fsu\_0071E\_14995.pdf

**TITLE:**Effects of a Mathematics Vocabulary Tutoring Intervention

**AUTHOR:**Hollingsworth, Leah Nicole

**MEMBER (Professor Directing Dissertation):**Jakubowski, Elizabeth M.

**MEMBER (University Representative):**Schwartz, Robert A.

**MEMBER (Committee Member):**Whalon, Kelly J.

**MEMBER (Committee Member):**Root, Jenny Rose

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Education

**CORPORATE NAME:**School of Teacher Education

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (124 pages)

**ABSTRACT:**The purpose of this study was to examine the effects of a vocabulary tutoring intervention with defining key vocabulary terms and algebraic problem-solving skills of students who struggle with mathematics. Literature shows that there is a need to further explore how students with mathematical learning difficulties learn mathematics vocabulary at the post-secondary level. The participants for this study included five college-aged students, 18 years or older, who self-identified as struggling with mathematics. Each participant completed two vocabulary tutoring sessions each week and complete layered-look books during each session. The layered-look books included the vocabulary word, definition, an example, and non-example. The dependent variable was the percentage of correct answers on a six-question test. Each test will contain three vocabulary short answer questions and three multiple-choice algebraic exercises. The researcher used a multiple probe across behaviors, replicated across participants design to determine what effect mathematics vocabulary tutoring has on a student’s ability to define vocabulary terms and what effect mathematics vocabulary tutoring has on a student’s algebraic problem solving. The study included three phases: baseline, vocabulary tutoring (intervention), and maintenance. The researcher followed a modeling and guided practice teaching strategy to tutor the student. Based on the results of this study, it was concluded that the vocabulary tutoring intervention did help students learn the vocabulary. Three of the five participants showed a functional relationship between the vocabulary intervention and defining key vocabulary words. However, the vocabulary tutoring intervention did not help participants with the algebraic problem-solving examples. None of the five participants had three demonstrations of effect.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the School of Teacher Education in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 7, 2019.

**NOTE (Keywords):**Mathematics, Tutoring, Vocabulary

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Elizabeth M. Jakubowski, Professor Directing Dissertation; Robert A. Schwartz, University Representative; Kelly J. Whalon, Committee Member; Jenny Rose Root, Committee Member.

**SUBJECT:**Mathematics--Study and teaching

**DEGREE:**Doctoral

**Record number: 82**

**FILENAME:**Howard\_fsu\_0071E\_15033.pdf

**TITLE:**Teacher Leaders' Agency in Collaborative Professional Learning in Instructional Reform Contexts

**AUTHOR:**Howard, Cassandra C.

**MEMBER (Professor Directing Dissertation):**Akiba, Motoko

**MEMBER (University Representative):**Turner, Jeannine E.

**MEMBER (Committee Member):**Khurshid, Ayesha, 1971-

**MEMBER (Committee Member):**Rutledge, Stacey A.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Education

**CORPORATE NAME:**Department of Educational Leadership and Policy Studies

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (166 pages)

**ABSTRACT:**This comparative case study explores the agency of two teacher leaders (TLs) as they facilitate their respective teacher-organized lesson study groups. Applying sociocultural theory, I describe TL agency as manifesting at two levels: (1) the meanings teachers make about student learning, teaching, and teacher learning and (2) their talk and actions as facilitators of teacher learning during lesson study. I find that differences in each TL’s meanings of teaching and learning contribute to different approaches to facilitation and ultimately, different opportunities to learn for the teachers in each group, despite a very similar lesson study design and context. One TL’s meanings of teaching and learning demonstrate a strong and cohesive vision of instructional improvement that reflects constructivist shifts in mathematics education and emphasizes deepening understanding of the connections between ideas and/or strategies. Her facilitation shapes opportunities to learn characterized by engaging in the resolving of dissonances between new and prior understandings. The other TL’s meanings of teaching and learning reflect a fusion of traditional and constructivist approaches to teaching and learning, where exploration of multiple tools and strategies is valued, but primacy remains on the outcome of correct solutions. Her facilitation does not shape opportunities to learn characterized by deepened understandings or shifts in meanings of teaching and learning. Policy implications for supporting TLs’ agency in collaborative learning will be discussed.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Educational Leadership and Policy Studies in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 25, 2019.

**NOTE (Keywords):**Agency, Collaborative Professional Learning, Lesson Study, Teacher leaders

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Motoko Akiba, Professor Directing Dissertation; Jeanine Turner, University Representative; Ayesha Khurshid, Committee Member; Stacey Rutledge, Committee Member.

**SUBJECT:**Educational leadership

**SUBJECT:**Education and state

**DEGREE:**Doctoral

**Record number: 83**

**FILENAME:**Inkoom\_fsu\_0071E\_14979.pdf

**TITLE:**Multilevel Competing Risks Models for the Performance Assessment of Transportation Infrastructure

**AUTHOR:**Inkoom, Sylvester Kwame

**MEMBER (Professor Directing Dissertation):**Sobanjo, John Olusegun, 1958-

**MEMBER (University Representative):**Chicken, Eric, 1963-

**MEMBER (Committee Member):**AbdelRazig, Yassir

**MEMBER (Committee Member):**Spainhour, Lisa

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**FAMU-FSU College of Engineering

**CORPORATE NAME:**Department of Civil and Environmental Engineering

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (101 pages)

**ABSTRACT:**Natural disasters such as hurricanes, earthquakes, storm surges, wildfires among other hazards affect communities and large geographic areas of the United States resulting in negative repercussions on the environment and the economy. The impacts of these hazards on bridges and other civil infrastructure affect the structural integrity and functionality of bridges, highway pavements and overall efficiency of the transportation network. This study focuses on the hazards that affect bridges and pavements, and the complex interactions and correlations among them, to evaluate the performance of civil infrastructure. Hazard scenarios are considered as competing risks impacting the health of bridges and highway pavements. The study derived stochastic distributions characterizing the behavior of bridge elements and pavement segments during natural deterioration process which are compared to their response in the presence of hazards. To achieve the above objective, competing risk models were developed for highway pavement in Florida in the presence of hurricane failures. Also, distributions and competing risk deterioration models for AASHTO Commonly Recognized (CoRe) bridge elements were developed using legacy data for bridges from the Florida Department of Transportation (FDOT). Annual probability of hazard occurrence data sourced from Federal Emergency Management Agency (FEMA – HAZUS) was employed to model hurricane induced pavement and bridge element failure. The expected service lives for highway pavement and bridge elements, transition and sojourn times from one condition state to another were obtained using the Cox Proportional Hazards, cumulative incidence functions, product-limit survival estimates and other survival functions. The method of likelihood estimation, weighting techniques and inference procedures were used to describe risk event data with censoring and truncation scenarios where necessary for the analyses. The cumulative incidence function and the Kaplan – Meier estimates were used to ascertain the effects of the modes of failures of bridge elements and highway pavements at the network levels in the presence of hurricanes. The results showed that three modes of failure (cracking, riding and rutting) are all significant to for pavements. As the roadway pavement section ages, the chance of failure is more likely to be due to cracking than the other competing modes. Based on the road functional classifications, the survival probabilities and the cumulative incidence estimates showed that the cracking defect was predominant on both interstate and non-interstate roadways. It was observed that urban and rural pavements deteriorated by the cracking and riding defects with the rutting failure mode being significant at the end of the service life of the pavement. The research also evaluated the significance of two competing risks events: “natural” crack deterioration of highway pavements in the presence of hurricane failure (Hurricane Categories 1, 2 and 3), for 6702 highway pavement sections using the nonparametric survival probability (Kaplan-Meier estimates) and the cumulative incidence function (CIF). The risks were compared using the Logrank Test (to indicate if the survival probabilities of the risks are significantly different), and the hazard ratio (ratio of hazard rates based on time to failure covariate). From the results, it was observed that the contribution of the Hurricane Category 3 as a competing risk was significantly higher and different from that of crack deterioration. For example, the hazard ratio indicated the effect of Hurricane Category 3 on pavement failure was twice as significant as that of the crack deterioration for the inland urban interstates roadways. Also, the hazard ratio between hurricane category 3 and crack deterioration was about 16 for rural interstates and 18 and 28 for urban non-interstates and rural non-interstates at the coastal locations respectively. The hazard ratios and CIF plots showed that impact of hurricanes on coastal roadways is more significant compared to how they affect the inland pavements. Finally, it was observed that the “natural” deterioration of bridge channels and hurricane induced channel failures generally yield significantly different impacts based on the logrank chi-square outputs. Also, it was observed the impact of hurricane categories 3 and 2 on bridge channel elements were more significant (based on the hazard ratios) at the coastal bridge locations than in the noncoastal areas, and also generally high for urban bridge channels compared to rural channels.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Civil and Environmental Engineering in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**January 18, 2019.

**NOTE (Keywords):**Bridges, Competing Risks, Hazards, Hurricanes, Pavements, Statistical Modeling

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**John O. Sobanjo, Professor Directing Dissertation; Eric Chicken, University Representative; Yassir AbdelRazig, Committee Member; Lisa Spainhour, Committee Member.

**SUBJECT:**Civil engineering

**DEGREE:**Doctoral

**Record number: 84**

**FILENAME:**Isaacs\_fsu\_0071N\_15090.pdf

**TITLE:**Decomposition a Collection of Truthy Auto-Fiction and Liberally Creative Non-Fiction

**AUTHOR:**Isaacs, Tiffany J.

**MEMBER (Professor Directing Thesis):**Stuckey-French, Elizabeth

**MEMBER (Committee Member):**Butler, Robert Olen

**MEMBER (Committee Member):**Howard, Ravi

**MEMBER (Committee Member):**Jaffe, Aaron

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of English

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (132 pages)

**ABSTRACT:**Decomposition skirts the boundary space between Autofiction (Serge Doubrovsky’s term for autobiographical fiction) and liberally Creative Nonfiction, where time has been collapsed or rearranged to tell a truer story. The collection is about women who yearn to find their place in the universe through better understanding the stories they’ve been told or tell about themselves, and the ones that are unspoken but true. In “Moonstone Beach,” the narrator seeks to redefine what it means to be a Denney woman when Denney is a legacy only passed down through her male family line. Ava, the heroin of “Infinity Plus One,” wonders how love can be both a prison and freedom and seeks answers in how sex has defined her. Both women in “My First Time” ultimately glimpse a world where women are meant to exist, but its far in the future, and only seeable if they can first heal from the lasting trauma of being raped by men. The narrator of “Decomposition” seeks to find why her own story of failure is louder than any of strength. While each woman in the collection yearns for a place that is wide and infinite and free, none see more than a flash. It’s their quest, however, to go boldly and unflinchingly into the dark that gives the rest of us hope.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Thesis submitted to the Department of English in partial fulfillment of the requirements for the degree of Master of Fine Arts.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 1, 2019.

**NOTE (Keywords):**Female Identity, Female Sexuality, Feminism, Gender, Rape, Women's Bodies

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Elizabeth Stuckey-French, Professor Directing Thesis; Robert Olen Butler, Committee Member; Ravi Howard, Committee Member; Aaron Jaffe, Committee Member.

**DEGREE:**Masters

**Record number: 85**

**FILENAME:**Ivey\_fsu\_0071E\_14989.pdf

**TITLE:**Old Time Fiddling in Florida: Implications for Music Education

**AUTHOR:**Ivey, Aisha Suzanne

**MEMBER (Professor Directing Dissertation):**Madsen, Clifford K.

**MEMBER (University Representative):**Holzman, Bruce

**MEMBER (Committee Member):**Geringer, John M

**MEMBER (Committee Member):**Bugaj, Kasia

**MEMBER (Committee Member):**Darrow, Alice-Ann

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (213 pages)

**ABSTRACT:**Florida has a rich history of traditional old time fiddling and the fiddle was the most popular musical instrument among early pioneers in Florida. Fiddlers were revered members of the community, often playing for social dances called frolics. Slaves that were brought from Africa mingled with settlers from Western Europe in the Southeastern United States, their different fiddle styles blending into a new genre of music that incorporated aspects of both cultures. Dances on plantations served as one of the few places where whites and African Americans socialized together. Fiddlers also played at home with their families, sharing music across generations. After the development of radio, musicians would often perform as part of live radio shows and record companies produced old time music recordings featuring fiddlers that influenced musicians near and far. Contests became popular after Henry Ford began promoting traditional dance and fiddling in the 1920s and 1930s and cities across Florida held contests or fiddlers conventions as part of community celebrations. The Future Farmers of America sponsored string bands which often included a fiddle player in the 1950s. The Florida Folk Festival has promoted traditional music and dance, featuring many fiddlers since its beginning in 1953. The Florida State Fiddlers Association holds the official state fiddle contest every year along with an annual convention that brings musicians together from all around the region. Further incorporation of traditional music in the curriculum could offer multiple advantages, including creating a more equitable learning experience for students.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the College of Music in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**February 18, 2019.

**NOTE (Keywords):**diversity, education, fiddle, Florida, Old Time, traditional

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Clifford Madsen, Professor Directing Dissertation; Bruce Holzman, University Representative; John Geringer, Committee Member; Kasia Bugaj, Committee Member; Alice Ann Darrow, Committee Member.

**SUBJECT:**Music--Instruction and study

**DEGREE:**Doctoral

**Record number: 86**

**FILENAME:**Iwamasa\_fsu\_0071E\_15130.pdf

**TITLE:**Music Therapy Degree Programs: Forecasting Enrollment, Program Development, and Faculty Demand

**AUTHOR:**Iwamasa, Dawn Ayume

**MEMBER (Professor Directing Dissertation):**Gooding, Lori F. (Lori Fogus)

**MEMBER (University Representative):**Weissert, William G.

**MEMBER (Committee Member):**Standley, Jayne M.

**MEMBER (Committee Member):**Madsen, Clifford K.

**MEMBER (Committee Member):**Thrasher, Michael, 1972-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (94 pages)

**ABSTRACT:**Music therapy degree programs originated in the 1940s and while programs have come and gone, not much was known about the profession’s trends. The current education policy was adopted in 2000, two years after the National Association for Music Therapy and the American Association for Music Therapy unified to form one governing organization called the American Music Therapy Association. In the decades since the first degree program was started, research focused primarily around entry-level competencies and curriculum issues. While the profession encountered meaningful growth in degree programs and enrollment, concerns were expressed regarding a possible shortage of doctorally prepared faculty. Full-time faculty openings are increasing along with a growing number of programs. Enrollment in undergraduate and master’s degree programs are also increasing. Hence, it is imperative that program trends and demand for qualified educators be examined. However, forecasting growth in programs, enrollment, and the need for faculty have not been investigated. The purpose of this study was to provide a descriptive analysis of current degree programs and full-time faculty, and to forecast future development of degree programs, enrollment, and the need for qualified faculty for the coming decade. The Autoregressive Integrated Moving Average (ARIMA) model was used as the forecasting method and the models predict that music therapy degree programs will grow a modest 6% compared to the prior decade’s 17% growth. Music therapy enrollment at NASM accredited schools, will grow more rapidly at 34%, however it is still less than the 65% growth experienced from 2000 to 2018. Demand for new full-time faculty was estimated based on retirement trends and enrollment projections. The need for new faculty will expand by 80 full-time positions through 2030. Limitations of the study, the culture of higher education and its impact on future degree program development and faculty recruitment, as well as policy considerations are discussed.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the College of Music in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 19, 2019.

**NOTE (Keywords):**degree programs, faculty, forecasting, higher education, music therapy

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Lori F. Gooding, Professor Directing Dissertation; William G. Weissert, University Representative; Jayne M. Standley, Committee Member; Clifford K. Madsen, Committee Member; Michael Thrasher, Committee Member.

**SUBJECT:**Education, Higher

**DEGREE:**Doctoral

**Record number: 87**

**FILENAME:**JIANG\_fsu\_0071E\_14962.pdf

**TITLE:**Two Essays on Corporate Finance

**AUTHOR:**Jiang, Zhiqian

**MEMBER (Professor Directing Dissertation):**Ang, James S.

**MEMBER (University Representative):**Semykina, Anastasia

**MEMBER (Committee Member):**Cheng, Yingmei

**MEMBER (Committee Member):**Liu, Baixiao

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Business

**CORPORATE NAME:**Department of Finance

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (102 pages)

**ABSTRACT:**This dissertation consists of two independent essays on corporate finance. The first essay explores the trend in the profitability of U.S. firms, why it occurs and how firms respond to it. We document that the return on assets (ROA) of U.S. firms has decreased by about two-thirds from 1980 to 2015; the trend is pervasive across industries and firms with different characteristics. We argue that the inefficacy of corporate investment could be the driver behind the deteriorating profitability. We show that firms have been cutting investments in response to the poor investment efficiency. However, the current level of investment cut does not seem to offer a satisfactory solution. At the firm-level, we do not find evidence that a significant cut in total investments helps improve accounting performance of low-investment-efficiency firms; and at the market-level, the cost of capital (COC) has been consistently above ROA over the entire sample period. The second essay studies the role of CEO’s managerial ability in the firms’ choice of board leadership. Using a sophisticated measure of managerial ability, we show that whether the CEO is capable or not does not affect whether he/she will be awarded the board chairman position. In general, the firms’ choice of board leadership does not reflect the balance between the benefits and costs of dual leadership. These findings are in sharp contrast to the claim found in many companies’ CEO-chairman appointment announcement that the two positions are given to a person of high managerial ability and cast doubt on the validity of “the efficiency argument” of dual leadership.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Finance in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**January 9, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**James S. Ang, Professor Directing Dissertation; Anastasia Semykina, University Representative; Yingmei Cheng, Committee Member; Baixiao Liu, Committee Member.

**SUBJECT:**Finance

**DEGREE:**Doctoral

**Record number: 88**

**FILENAME:**Jiang\_fsu\_0071E\_15027.pdf

**TITLE:**A Comparative Study of Piano Performance Programs at University-Level Institutions in China and the United States

**AUTHOR:**Jiang, Yuan

**MEMBER (Professor Directing Dissertation):**Dumlavwalla, Diana Teresa

**MEMBER (University Representative):**Kalhous, David, 1975-

**MEMBER (Committee Member):**VanWeelden, Kimberly D.

**MEMBER (Committee Member):**Fredrickson, William E.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (130 pages)

**ABSTRACT:**As we work and study in our increasingly globalized society, there is a growing trend of Chinese piano students choosing to pursue their higher education in the United States. Elite music institutions in America are also seeking and recruiting a large number of Chinese pianists. This trend raises questions regarding the similarities and differences between Chinese and American piano performance programs in university-level institutions. The purpose of this study was to promote a greater understanding of Chinese and American piano performance programs in higher education through examining selected university-level institutions. To accomplish this goal, (1) the researcher collected data from the selected university-level institutions in both countries regarding their piano-related degree offerings, audition requirements, curriculum requirements, and core course offerings for the piano performance programs. These data were used to analyze and compare the structure and design of piano performance degree programs in both countries; (2) the researcher also conducted an online survey to gather information regarding current faculty members’ and students’ perceptions of their piano performance programs. Their perspectives shed light on why so many Chinese students continue their music education in the United States. A total of 20 university-level institutions (N = 20) were selected in the U.S. (n = 10) and China (n = 10) as the sample institutions in this study. Survey participants included the students who were currently enrolled in piano performance programs and faculty members who were currently teaching in the sample institutions in both countries. A total number of 34 student participants and 7 faculty participants in the U.S. along with 119 student participants and 11 faculty participants in China completed the questionnaires. Results indicated that while only one institution in China offers a doctoral degree, all the sample institutions in the U.S. offer doctoral degrees in piano performance. Institutions have similar audition requirements in both countries, but the American institutions have a broader review process for admission. Although both the Chinese and the U.S. institutions had a similar structure in their curricula, the balance of required credits in each area was noticeably different. Overall, American institutions focus more on the major area than Chinese institutions in both undergraduate and graduate programs. In addition, the structure of the core course offerings is also very similar. Applied lessons, piano literature, piano pedagogy, accompanying, and recitals are the core courses that commonly appear on the institutions’ curriculums in both countries. A large percentage of student participants in both countries indicated that their ideal career was being a faculty member in higher education. Although results indicated that overall, there is no significant differences between the students’ level of satisfaction of the core courses in their piano performance programs, students in the U.S. were significantly more satisfied with the applied lessons and the degree recital in their programs than the students in China. It is encouraging that not only students gave careful attention toward the applied lessons and performance opportunities in their studies, but also that a large percentage of the students believed they received excellent advice regarding practice strategies and artistry in their applied lessons in both countries. The statements made by faculty participants illustrate that the vast majority of them in both countries expressed positive attitudes regarding the piano performance programs in their universities. Faculty members in both countries believed that piano technical skills were difficult to establish and develop during the collegiate level education. Therefore, they recommended that prospective students must build a solid foundation and master the technical skills before college. Interestingly, faculty participants in the U.S. were more concerned about the graduation requirements in their piano performance programs while Chinese faculty participants cared more about the admission requirements in their programs. According to the comparative results of the research questions, the factors that attract Chinese students to study in the U.S. can be attributed to the following aspects: 1) students plan to seek the most advanced degree—doctoral degree in piano performance; 2) students may have less stress related to studying for standardized tests during the application process; 3) students may be able to complete the program and obtain the master’s degree in a shorter period of time; 4) the design of the programs/curriculums may allow students to receive more personal attention and more professional development; 5) students may become more independent and can receive better quality of applied lessons and degree recital preparation; and 6) they may gain more performance opportunities and receive a comprehensive view of the subject matter.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the College of Music in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 6, 2019.

**NOTE (Keywords):**America, China, higher education, piano performance programs, piano students

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Diana Dumlavwalla, Professor Directing Dissertation; David Kalhous, University Representative; Kimberly VanWeelden, Committee Member; William Fredrickson, Committee Member.

**SUBJECT:**Music--Instruction and study

**SUBJECT:**Music

**SUBJECT:**Education, Higher

**DEGREE:**Doctoral

**Record number: 89**

**FILENAME:**Jo\_fsu\_0071E\_15114.pdf

**TITLE:**N-Heterocyclic Carbene Copper Complexes: Catalysis and Coordination Chemistry

**AUTHOR:**Jo, Minyoung

**MEMBER (Professor Directing Dissertation):**Shatruk, Mykhailo

**MEMBER (University Representative):**Locke, Bruce R.

**MEMBER (Committee Member):**Miller, Brian G.

**MEMBER (Committee Member):**Hanson, Kenneth G.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Chemistry and Biochemistry

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (150 pages)

**ABSTRACT:**N-heterocyclic carbene (NHC) transition metal complexes have emerged as an important class of compounds in catalysis and coordination chemistry. As shown in Chapter 1 of this thesis, the strong σ-donating and weak π-accepting ability of NHC ligands, combined with sterically demanding substituents, enable the NHC-metal complexes to exhibit high chemical and thermal stability, consequently leading to good catalytic activity. NHCs with expanded rings, in particular, have been found to exhibit distinct electronic and steric character, which contributes to improving the catalytic efficiencies in the transition metal system. Ring-expanded NHCs are considered to be stronger electron donors and more sterically demanding ligands as compared to the classical 5-membered NHCs. These changes in the ligand’s character are caused by the additional methylene groups on the ring backbone and the enlarged N-C-N angle at the carbene center. Taking into account such appealing properties of the 6-membered NHCs, we have developed Cu(I) complexes bearing fused cyclic 6-membered NHC rings which exhibit superior activities in asymmetric allylic substitutions, which are described in Chapter 3. The highest regio- and enantioselectivity were achieved especially when the unusual aryl ether substrates were involved in the reactions mediated by the 6-NHC-Cu(I) catalysts. To find a rationale for such unconventional reactivities and better discern the reaction pathway, the systematic investigation has been conducted with complexes incorporating varied NHC ligands, substrates with different leaving groups, and various alcohol additives, all of which are expected to have a substantial impact in the catalytic cycle. Variation of the NHC ligands in the Cu-catalyzed allylic borylation with the aryl ether substrate showed different reaction rates depending on the NHC structure, where 6-NHC led to the full conversion within 9 h, as opposed to 5- and 7-membered NHCs which showed incomplete reactions even after 48 h. The leaving group of the substrate was significantly related to the product selectivity, as poor leaving groups, such as aryl ether and carbonate, induced high regio- and enantioselectivity compared to the good leaving groups, like bromide and mesylate, which gave rise to reduced selectivities. Recognizing the increased reaction rate by using alcohol additives, methanol and ethanol were found to promote the highest rates in our 6-NHC-Cu-catalyzed reactions, in contrast to bulky alcohols, which showed slower reaction rates. This result supports our hypothesis of the rate-determining 6-membered alcohol-involving transition state, the formation of which is sensitive to steric congestion. This study demonstrates that matching leaving group and catalyst is important to design the reaction, and when it comes to our NHC-Cu catalysts, the perfect paring of the extended aromatic 6-NHC ligand with the aromatic leaving groups provides an optimal catalytic system to reach the highest reaction rate and stereochemical outcomes. In terms of the coordination chemistry of NHC-Cu(I) complexes, these closed-shell Lewis-acidic moieties are considered to be suitable for reactions with main-group clusters to provide exceptional stability and increased solubility to the resulting assemblies, allowing their further modification through the solution chemistry. With this point in mind, in Chapter 4 we demonstrate the use of polyphosphide clusters as ligands in NHC-Cu complexes. Treatment of (TMS)3P7 (TMS = trimethylsilyl) with the NHC-CuCl gave rise to the large anionic bimetallic cluster, [NHC-Cu-P7(TMS)]–, crystalized as the [NHC-Cu-NHC]+ salt. Its crystal structure reveals that [(TMS)P7]2– is bound to the Cu(I) center via the η4 coordination mode, which leads to a slight distortion from the original nortricyclane-like structure. The reaction with the gold analogue delivered the fully-substituted neutral molecule, (NHC-Au)3P7, retaining the geometry and symmetry of the initial cage. In contrast to the original (TMS)3P7 cluster, these complexes show improved stability and solubility, being soluble in less polar solvents. Finally, in Chapter 5, we demonstrate a new solution-phase methodology to convert the elemental red phosphorus into polyphosphide clusters, which indeed prompted the investigation of their reactivities described in the preceding chapter. A reaction between red phosphorus and potassium ethoxide in THF/DME yielded a mixture of soluble polyphosphide species containing P162–, P213–, and P5–. The use of such mild reactants offers the ease of red phosphorus activation to improve the accessibility to the polyphosphide species, which was not readily achieved by the conventional methods using strongly reducing reactants. The reaction outcome is governed by the choice of solvent, particularly by the boiling points and polarity, since the boiling point determines the activation temperature, and the polarity seems to be related to the stabilization of the resulting polyphosphide clusters. Other potential activators such as thiolates were examined, giving rise to only P162– species selectively, which suggests that the activation proceeds via a redox mechanism, in contrast to the nucleophilic activation with alkali metal alkoxides.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Chemistry and Biochemistry in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 11, 2019.

**NOTE (Keywords):**asymmetric reaction, catalyst, copper, N-heterocyclic carbene, phosphorus, polyphosphide

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Michael Shatruk, Professor Directing Dissertation; Bruce Locke, University Representative; Brian G. Miller, Committee Member; Kenneth G. Hanson, Committee Member.

**SUBJECT:**Chemistry

**DEGREE:**Doctoral

**Record number: 90**

**FILENAME:**Johnston\_fsu\_0071E\_15076.pdf

**TITLE:**Spatial and Temporal Drivers of Arctic and Boreal Dissolved Organic Matter Composition across Latitudinal Gradients

**AUTHOR:**Johnston, Sarah Ellen

**MEMBER (Professor Directing Dissertation):**Spencer, Robert G. M.

**MEMBER (University Representative):**Marshall, Alan G. (Alan George), 1944-

**MEMBER (Committee Member):**Chanton, Jeffrey P.

**MEMBER (Committee Member):**Huettel, Markus

**MEMBER (Committee Member):**Knapp, Angela Noel, 1976-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Earth, Ocean and Atmospheric Science

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (179 pages)

**ABSTRACT:**Northern high-latitude regions are undergoing rapid changes as the Arctic warms at about twice the rate of mid-latitudes. Climate change is causing permafrost thaw, vegetation and hydrologic shifts, and the increased incidence of wildfire, all of which have major implications for regional and global carbon (C) cycling. In this study, I evaluate dissolved organic matter (DOM) composition across temporal and spatial gradients using chromophoric DOM (CDOM), the biomarker lignin phenol, and Fourier transform ion cyclotron resonance mass spectrometry (FT- ICR MS). The goal of this dissertation was to improve spatial and temporal understanding of DOM composition and cycling across aquatic gradients by improving spatial (Chapter 1) and temporal (Chapter 2) coverage of DOM composition, and using space for time gradients to understand the seasonal and landscape scale controls on DOM composition in lakes and rivers (Chapters 3 and 4, respectively) and how they may change into the future. Finally, an overarching theme of these studies were the utilization of optical measurements to estimate dissolved organic carbon (DOC) concentration and DOM composition for future applications for in situ and remote sensing technology. By including an understudied, mid-sized watershed in pan-Arctic flux estimates as a model for the unsampled portion of the pan-Arctic watershed (i.e. not encompassed in the major six Arctic rivers from which historic estimates are extrapolated) DOC flux estimates were increased from 27 Tg C to 34 Tg C annually to the Arctic Ocean. Additionally, the residence time of lignin and thus terrestrial DOM was further constrained from previous studies to 0.5 to 1.8 years. This refinement of the pan-Arctic flux estimate and terrestrial DOM residence time is important for the accurate assessment of land-ocean C fluxes and their implications for future change. Temporal DOM dynamics were also evaluated in both rivers and lakes. Diel lake sampling revealed that seasonal variability accounted for the greatest changes in DOM composition and underscored the need to sample lakes seasonally while regular diel trends were not observed. Finally, using space for time transitions in both lakes and rivers the seasonal and landscape drivers of DOM composition were evaluated to allow future projections in a changing Arctic. In lakes that were relatively hydrologically disconnected there was lower CDOM compared to hydrologically connected lakes and a strong decoupling of DOC from CDOM. Further evidence showed that DOM in these lakes was driven by autochthony and that a future drier climate is unlikely to cause browning in these lakes as suggested by recent research. In rivers, where hydrologic connectivity is high, the watershed relief, soils and vegetation played an important role in determining DOM composition. Lower DOC yields and more aliphatic DOM were mobilized in watersheds underlain by continuous permafrost compared to discontinuous permafrost. Together these studies show the utility of space for time gradients to project future change and the use of CDOM parameters as a proxy for DOC concentration and DOM composition. Taken together these results allow us to make projections for boreal and arctic change, as well as allow future studies to improve spatial and temporal resolution via CDOM parameters.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Earth, Ocean and Atmospheric Science in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 15, 2019.

**NOTE (Keywords):**Arctic, Boreal, Carbon Cycling, Chromophoric Dissolved Organic Matter, Dissolved Organic Matter, Lignin

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Robert G. M. Spencer, Professor Directing Dissertation; Alan Marshall, University Representative; Jeffrey P. Chanton, Committee Member; Markus Huettel, Committee Member; Angela Knapp, Committee Member.

**SUBJECT:**Chemical oceanography

**DEGREE:**Doctoral

**Record number: 91**

**FILENAME:**Jones\_fsu\_0071E\_15119.pdf

**TITLE:**Building Europe: Determinants of Identity, Trust, and Support for Integration

**AUTHOR:**Jones, Eryn M.

**MEMBER (Professor Directing Dissertation):**Ehrlich, Sean D.

**MEMBER (University Representative):**Grant, Jonathan A., 1963-

**MEMBER (Committee Member):**Gomez, Brad T., 1970-

**MEMBER (Committee Member):**Beazer, Quintin H.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Social Sciences and Public Policy

**CORPORATE NAME:**Department of Political Science

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (131 pages)

**ABSTRACT:**Since its inception the European Union has made great strides in the realm of regional integration. However, the political and economic crises of the last decade have fundamentally changed the political landscape of the EU and have had important implications for continued support of the European project. In the era of the “constraining dissensus” many argue that a true European demos cannot exist and questions of EU legitimacy have taken center stage. As such, we are left with questions of to what extent to individuals view themselves as European and what contributes to this identity? How might the legitimacy of, and therefore diffuse support for European institutions be strengthened? And finally, what factors contribute to support for continued integration in Europe? To understand how, and indeed if, the EU can continue to grow and integrate we must first examine the extent to which a European demos does exist as well as the extent to which the EU is viewed as a representative institution. To this end, this project examines the factors that contribute to an individual level European identity, how this identity influences trust in European institutions, and finally how the influences of these factors on individuals’ support for both continued widening and deepening in Europe.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Political Science in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 15, 2019.

**NOTE (Keywords):**European Union, Identity, Institutional Trust, Integration, Public Opinion

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Sean D. Ehrlich, Professor Directing Dissertation; Jonathan A. Grant, University Representative; Brad Gomez, Committee Member; Quintin Beazer, Committee Member.

**SUBJECT:**Political science

**DEGREE:**Doctoral

**Record number: 92**

**FILENAME:**Kaba\_fsu\_0071E\_15186.pdf

**TITLE:**Fate of Mc252 Crude Oil from the Deepwater Horizon Accident in Northern Gulf of Mexico Permeable Sandy Beaches

**AUTHOR:**Kaba, John, III

**MEMBER (Professor Directing Dissertation):**Huettel, Markus

**MEMBER (University Representative):**Miller, Thomas E., (Professor of Biological Science)

**MEMBER (Committee Member):**Chanton, Jeffrey P.

**MEMBER (Committee Member):**Dewar, William K.

**MEMBER (Committee Member):**Mason, Olivia Underwood

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Earth, Ocean and Atmospheric Science

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (87 pages)

**ABSTRACT:**In the spring of 2010, the MC 252 Deepwater Horizon well blow out lead to nearly five million barrels of Gulf of Mexico light sweet crude to be released into the northern Gulf at a depth of 1500 meters. Dispersant injected into the plume at the wellhead helped little to keep the oil below the surface. This dispersant inefficiency, coupled with the limited effectiveness of sea surface mitigation, allowed an estimated 150,000 barrels to impact the shores of the Northern Gulf of Mexico, from East Texas to the Western Florida Panhandle. Nearly half of the impacted coastline is comprised of permeable sandy beaches. The surface oil took several months to reach the shore, and over that time it was degraded by heat, UV light, oxygen, and microbes. The weathered oil final reached the shores of Pensacola Beach, Florida on June 22, 2010. In the surf zone, the weathered oil was mixed with sand to form Sediment-Oil-Aggregates (SOA) that sank in the swash zone between the beach and longshore bar. This SOA material was transported with longshore currents, and repeatedly buried and exhumed. The weathered oil also came ashore at the same time as Tropical Storm Lee, whose increased wave action cause some of the SOA material to be deposited and buried into the dry beach sediment above the high-water line. The goal of this dissertation is to investigate the fate of MC252 crude oil from the Deepwater Horizon accident on Northern Gulf of Mexico permeable sandy beaches. Sampling trips to Santa Rosa Island, Florida were performed monthly from July 2010 to July 2011, where sediment cores from the dry beach above the high-water line were taken. These cores were sectioned and incubated to measure microbial activity in response to the buried oil, using oxygen as a proxy, over the year after the oil came ashore. On these trips, SOA material on the beach and in the surf was collected, homogenized, and use for lab incubations to investigate the role of microbes, temperature, and mechanical stress due to wave action, on the degradation of SOA material in the surf zone. Column experiments were also performed to investigate the aerobic decomposition of SOA material in the coastal water column and permeable sediments. The time series incubations showed that clearly oiled sections of sediment had significantly higher oxygen consumption rates, compared to sections that were visibly clean. In October of 2010, beach cleaning crews used heavy machinery to exhume the top meter of beach, sieve out the large SOAs, and in the process homogenized the smaller oil particles throughout the top meter of beach sand, increasing the surface area available to microbes for degradation. By April of 2011, a clearly oiled layer in the beach was no longer visible. Along with decreasing visible oil in the dry sediment, SOA material in the swash zone also decreased during the year. In laboratory incubations, it was found that microbes play a large part in the degradation of the SOA material, with microbes accounting for 80% of the oxygen consumption in SOA incubations. Higher temperatures increased the rate of oxygen consumption, with warmer summer temperatures causing a 4-fold increase in oxygen consumption rates over winter temperatures. The mechanical stress of wave action also causes the SOA material to quickly fall apart. In incubations, SOA material was rotated at 0.5rpm, and SOAs were disintegrated within 24 hours. In column experiments, it was found that increased fluid front velocity increased the oxygen consumption rates of sediment with artificially weathered crude oil. In columns amended with SOA material, there was no difference in oxygen consumption compared to sediment with no SOA material. There was also very little DOC release in SOA columns where the water was amended with Corexit 9500®, suggesting that the small surface area to volume ratio of larger, intact SOAs buried in the sediment develop a tough crust of highly degraded hydrocarbons, protecting the more labile inside from microbial degradation. This research shows the importance of microbial activity, wave action, and temperature on the degradability of the Deepwater Horizon oil. The wave energy of the environment, coupled with the permeable sandy sediments and warm temperature of the Florida summer, all contributed to the rapid degradation of the oil.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Earth, Ocean and Atmospheric Science in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 12, 2019.

**NOTE (Keywords):**Beach, Corexit, Deepwater Horizon, Oil, SOA

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Markus Huettel, Professor Directing Dissertation; Thomas E. (Tom) Miller, University Representative; Jeffrey P. Chanton, Committee Member; William Dewar, Committee Member; Olivia Mason, Committee Member.

**SUBJECT:**Chemical oceanography

**DEGREE:**Doctoral

**Record number: 93**

**FILENAME:**Karabag\_fsu\_0071N\_15065.pdf

**TITLE:**The Impact of Vehicle Modal Activity and Green Light Optimized Speed Advisory (GLOSA) on Exhaust Emissions through the Integration of VISSIM and Moves

**AUTHOR:**Karabag, Hasan H. (Hasan Huseyin)

**MEMBER (Professor Directing Thesis):**Ozguven, Eren Erman

**MEMBER (Committee Member):**Sobanjo, John Olusegun, 1958-

**MEMBER (Committee Member):**Moses, Ren

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**FAMU-FSU College of Engineering

**CORPORATE NAME:**Department of Civil and Environmental Engineering

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (87 pages)

**ABSTRACT:**Air pollution is a very critical non-natural hazard that adversely affects human health as well as the environment itself in the context of climate change. One of the biggest contributors to air pollution is the transportation industry. According to the U.S. Environmental Protection Agency (EPA), transportation is the second leading source for greenhouse gas (GHG) emissions, contributing to GHG emissions by 28%. Researchers and practitioners have been working on developing techniques to estimate and reduce transportation-related emissions by the help of various types of technologies. As such, this study aimed to investigate the effect of vehicle operating modes (i.e., constant running, idling, accelerating, and braking) on vehicle exhaust emissions in order to highlight the importance of occasionally disregarded factors that exacerbate the transportation-related air pollution problem. In order to accomplish this goal, this study adopted an approach involving two frequently used software for estimating emissions, namely VISSIM (a microscopic traffic simulation software) and EPA’s Motor Vehicle Emission Simulator (MOVES). The input data required for these software was collected, processed, and introduced into the models in order to estimate the emissions. First, a corridor was simulated within the VISSIM. This corridor is located in the City of Tallahassee, Florida, which is highly congested during the peak hours, and approximately 7.7 miles long, with 22 signalized intersections. Next, the outputs of VISSIM were collected and provided to MOVES by developing an integration tool. First, average speed and volume data were provided to MOVES only for the whole corridor, and VISSIM and MOVES emissions for carbon monoxide (CO) and nitrogen oxides (NOx) were compared. Note that VISSIM provides only emissions for CO and NOx. After observing the massive difference between VISSIM and MOVES emissions, the importance of using operating mode distribution file in MOVES was pointed out. To meet this end, the integration tool was enhanced to compute the vehicle operating mode distribution file based on second-by-second vehicle trajectory output. This was provided to MOVES in order obtain more accurate emission estimation results since only average speed and volume data could not provide accurate emission values disregarding the different vehicle operating modes. For this purpose, an algorithm, named as operating mode calculation algorithm (OMCA), was developed in Python 3.0 to create operating mode distribution input by using second-by-second vehicle trajectory data of VISSIM. This type of analysis focusing on the emissions of individual vehicles provided more accurate emission results. Now that these results were obtained, the focus of the thesis shifted towards analyzing the impact of vehicle connectedness on the air pollution. Two intersections of the selected highway corridor were modelled and simulated with a connected environment using one of the widely used vehicle-to-infrastructure (V2I) communication application called Green Light Optimized Speed Advisory (GLOSA). The GLOSA was implemented on the major leg of these intersections only with different Connected Vehicle (CV) penetration rates. One of the selected legs was the most congested link of the corridor. After extensive simulations, second-by-second VISSIM trajectory data were provided to OMCA, which converted them to MOVES operating mode distribution input files. Finally, MOVES was run in order to estimate carbon monoxide (CO), nitrogen oxides (NOx), primary exhaust smaller than 2.5 micrometer (PM2.5) and primary exhaust smaller than 10 micrometer (PM10) emissions. Findings of the study can aid researchers in understanding the effect of different operation modes on the exhaust emissions, understanding the effect of smoother and lower number of stop-and-go driving operations in the context of the connected vehicle impact on the exhaust emission, and quantifying the potential operational and environmental benefits of connected vehicles (CV’s).

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the Department of Civil and Environmental Engineering in partial fulfillment of the requirements for the degree of Master of Science.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 27, 2019.

**NOTE (Keywords):**Connected vehicle, Emission, GLOSA, MOVES, Simulation, Traffic

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Eren Erman Ozguven, Professor Directing Thesis; John O. Sobanjo, Committee Member; Ren Moses, Committee Member.

**SUBJECT:**Transportation--Planning

**SUBJECT:**Human ecology--Study and teaching

**DEGREE:**Masters

**Record number: 94**

**FILENAME:**Kelley\_fsu\_0071E\_15159.pdf

**TITLE:**Consumer-Based Strategy and Organizational Frontlines: The Role of Socially-Induced Interactions and Atmospherics on Consumer Behavior

**AUTHOR:**Kelley, Corinne M.

**MEMBER (Professor Co-Directing Dissertation):**Scott, Maura L.

**MEMBER (Professor Co-Directing Dissertation):**Mende, Martin

**MEMBER (University Representative):**Hanks, Lydia

**MEMBER (Committee Member):**Hofacker, Charles F.

**MEMBER (Committee Member):**Gustafsson, Anders, 1964-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Business

**CORPORATE NAME:**Department of Marketing

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (144 pages)

**ABSTRACT:**In two essays, this dissertation contributes to the emerging fields of consumer-based strategy and organizational frontline research. I examine the influence of social and atmospheric factors on consumer behavior, providing substantive and generalizable managerial insights to enhance organizational strategies at the frontline (i.e., point where the consumer and the firm meet). In Essay I, I examine how socially-induced communications (i.e., interactions) at the organizational frontline impact consumers’ prosocial behavior and store patronage; thereby, connecting OFR to consumer social responsibility. In particular, I introduce the ambassador effect as a novel, socially-induced form of pre-commitment that influences consumers’ prosociality and patronage intentions. Three field studies and five experiments show that inducing an ambassador role (by asking consumers to both (a) engage in a prosocial behavior and (b) to involve another person in the same prosocial behavior) increases consumers’ prosocial behavioral intentions and patronage intentions, beyond what previously established question-behavior effects or mere personal pre-commitments can achieve. The ambassador effect is mediated by a consumer’s enhanced warm glow and group orientation. Additionally, this research examines the moderating role of environmental consciousness, demonstrating that inducing an ambassador role increases real prosocial behavior among consumers low (vs. high) in environmental consciousness. Finally, this research investigates the interaction of the ambassador effect with firm policy (reward-based vs. penalty-based) to examine which approach is more effective at encouraging consumer prosocial behavioral intentions and patronage intentions. The results show that, in general, penalty-based retail policies (e.g., charging a fee for using a plastic shopping bag) are inferior to reward-based retail policies (e.g., offering a discount for using a reusable shopping bag). However, inducing an ambassador role attenuates the negative sentiments associated with penalty-based policies. Indeed, under a penalty-based policy, consumers in an ambassador role (vs. not) report more prosocial behavioral intentions and higher patronage intentions, attenuating differences between penalty-based and reward-based policies. Because many organizations and governments are applying penalty- and reward-based financial incentives to encourage consumer prosociality at the organizational frontline, my research provides meaningful, practical, and timely implications for scholars, managers, and policy makers. In Essay II, I conceptualize how olfactory changes to the servicescape (via ambient scenting strategies) affect behavioral, physiological, and psychological consumer outcomes at the organizational frontline; bridging the gap between OFR and sensory marketing. In the former half of this essay, I theorize the impact of gender-based ambient scents (a feminine or masculine ambient scent) on consumer spending as function of the scent’s congruence with the consumer’s gender. I suggest that gender-based ambient scents elicit distinct responses among male and female consumers. Specifically, male consumers spend more when exposed to a gender-incongruent (vs. gender-congruent) ambient scent, whereas female consumers are relatively unaffected. This increase in spending among male consumers is predicted to be mediated by a reduced sense of self-control. Moreover, this research proposes an important boundary condition: male consumers who are exposed to a gender-incongruent ambient scent increase their spending specifically on status-signaling (vs. neutral) products. By re-examining the current marketplace perspective ⸺ that gender-congruent scents are preferable ⸺ this research offers actionable and counterintuitive implications to aid retail managers in the application of ambient scents in their stores (i.e., at the organizational frontline). In the latter half of Essay II, I conceptualize the impact of pleasant, appetizing (e.g., chocolate-chip-cookie, apple-pie) and non-appetizing (e.g., fresh linen, cotton) ambient scents on consumers’ affinity toward (i.e., preference displayed via increased attitude, attention, recall, product selection, purchasing behavior, loyalty, etc.) vice and virtuous offerings. I theorize that exposure to an appetizing scent increases consumers’ affinity toward vice offerings. Whereas, exposure to a non-appetizing scent decreases consumers’ affinity toward vice offerings, and simultaneously, increases their affinity toward virtuous offerings. Furthermore, this research proposes that consumers’ state level of personal control moderates the effects of (non-)appetizing ambient scents. When consumers feel a strong sense of personal control, the effects of (non-)appetizing ambient scents are attenuated, causing exposure to either scent to result in a decrease (increase) in consumers’ affinity toward vice (virtuous) offerings. Thus, this research affords important implications for firms who produce vice or virtuous offerings, providing insight into the application of (non-)appetizing scenting strategies at the frontline.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Marketing in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 1, 2019.

**NOTE (Keywords):**ambassador effect, consumer-based strategy, gender-based ambient scents, (non-)appetizing ambient scents, organizational frontline research, prosocial behavior

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Maura L. Scott, Professor Co-Directing Dissertation; Martin Mende, Professor Co-Directing Dissertation; Lydia Hanks, University Representative; Charles F. Hofacker, Committee Member; Anders Gustafsson, Committee Member.

**SUBJECT:**Marketing

**DEGREE:**Doctoral

**Record number: 95**

**FILENAME:**Kidando\_fsu\_0071E\_15049.pdf

**TITLE:**Dynamic and Stochastic Transition of Traffic Conditions and Its Application in Urban Traffic Mobility

**AUTHOR:**Kidando, Emmanuel

**MEMBER (Professor Directing Dissertation):**Moses, Ren

**MEMBER (University Representative):**Duncan, Michael Douglas

**MEMBER (Committee Member):**Ozguven, Eren Erman

**MEMBER (Committee Member):**Sobanjo, John Olusegun, 1958-

**MEMBER (Committee Member):**Sando, Thobias M., 1973-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**FAMU-FSU College of Engineering

**CORPORATE NAME:**Department of Civil and Environmental Engineering

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (163 pages)

**ABSTRACT:**Analytical models developed using field data can provide useful information with acceptable confidence to evaluate and predict the operational characteristics of a highway. As such, this study presents statistical models that can be used to estimate the travel time or speed distribution, cluster different traffic conditions, to model the dynamic transition of traffic regimes (DTR), and quantify the disparity-effects on the DTR associated with different lateral lane positions (i.e., lane near shoulder, middle lane(s) and lane near a median) as well as different days of the week. In the analysis, this study uses Bayesian frameworks to estimate the model parameters. These frameworks reduce the impact of model over-fitting and also incorporate uncertainty in the estimates. Data from a freeway corridor along I-295 located in Jacksonville, Florida were selected for analysis. It includes data from individual microwave vehicle sensors, segment level aggregated traffic data and data aggregated at a corridor level. The proposed probabilistic frameworks developed by this study can be a useful resource in detecting and evaluating different traffic conditions, which can facilitate the planning action to implement congestion-related countermeasures in urban areas. In addition, findings from the hierarchical regression model presented by the current study can be used in the application of intelligent transportation systems, mainly in the dynamic lane-management strategy.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Civil and Environmental Engineering in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 25, 2019.

**NOTE (Keywords):**Bayesian non-parametric, Change-point regression, Disparity-effect, Dynamic transition of traffic regimes, Traffic breakdown event, Traffic congestion

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Ren Moses, Professor Directing Dissertation; Michael Duncan, University Representative; Eren E. Ozguven, Committee Member; John O. Sobanjo, Committee Member; Thobias M. Sando, Committee Member.

**SUBJECT:**Civil engineering

**SUBJECT:**Transportation--Planning

**SUBJECT:**Statistics

**DEGREE:**Doctoral

**Record number: 96**

**FILENAME:**KieberIII\_fsu\_0071E\_15060.pdf

**TITLE:**Investigations into Structure-Property Relationships of Novel Polymers Synthesized Primarily from Bio-Renewable Resources

**AUTHOR:**Kieber, Robert John, III

**MEMBER (Professor Directing Dissertation):**Kennemur, Justin Glenn

**MEMBER (University Representative):**Alamo, Rufina G.

**MEMBER (Committee Member):**Schlenoff, Joseph B.

**MEMBER (Committee Member):**Miller, Brian G.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Chemistry and Biochemistry

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (208 pages)

**ABSTRACT:**This dissertation investigates the synthesis and characterization of polymers primarily derived from renewable biomass sources, along with the structure-property influences on material properties. One polymer that has garnered interest as a promising value-added material is poly(2-vinylfuran) (PVF), an analog to styrene (S) derived from hemicellulose. Previous reports have determined the sole effective polymerization method to be through an emulsion. Investigations into this peculiar observation herein determined that compartmentalization of the propagating chains allows for radical propagation, which was found to be an order of magnitude faster than for styrene. Further analysis of kinetics and material properties of the resulting polymers were investigated. In an alternate thrust, biomass derived isohexides were studied in detail to determine the influence of the inherent stereocenters on resulting polymer properties. Novel polyurethanes were synthesized from isosorbide (IS) and isomannide (IM) derived diisocyanates, as well as 2,5-bishydroxymethylfuran (BHMF) in varying feed ratios. It was concluded that the difference in stereochemistry significantly influenced chain behavior and the presence of entanglements, contributing significantly to the observed mechanical behavior. In an alternate thrust, the reactivity differences of the two chiral alcohols on IS were utilized to synthesize various asymmetric monomers capable of chain growth polymerizations. The resulting polymers were of significantly higher molecular weight and showed interesting thermal behavior due to the rigidity of the isohexide core. An additional investigation was conducted into the mechanical and viscoelastic properties of poly(4-phenylcylcopentene) (P4PCP) and its hydrogenated counterpart (H2-P4PCP), which is a novel ethylene-styrene (ES) copolymer analog previously synthesized in our lab. Both polymers were found to be quite ductile with glasstomeric behavior due to the proximity of the Tg to room temperature (~17 °C). Both polymers were found to have quite high elastic recovery and polymer creep, indicating the greater contribution of viscous behavior to the overall polymers. The precise arrangement of styrene (S) units along the backbone along with the lack of atactic polystyrene (PS) homopolymers was found to significantly influence material properties compared to previously synthesized ES copolymers.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Chemistry and Biochemistry in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 10, 2019.

**NOTE (Keywords):**Biomass, Isosorbide, Sustainable Polymers, Vinylfuran

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Justin G. Kennemur, Professor Directing Dissertation; Rufina Alamo, University Representative; Joe Schlenoff, Committee Member; Brian G. Miller, Committee Member.

**SUBJECT:**Polymers

**SUBJECT:**Chemistry

**SUBJECT:**Chemistry

**DEGREE:**Doctoral

**Record number: 97**

**FILENAME:**Kilpatrick\_fsu\_0071E\_14986.pdf

**TITLE:**The Role of the Behavioral Inhibition and Activation Systems in the Stress Process

**AUTHOR:**Kilpatrick, Quentin K. (Quentin Kaeh)

**MEMBER (Professor Directing Dissertation):**Taylor, Jeanette E

**MEMBER (University Representative):**Coutts, Christopher

**MEMBER (Committee Member):**McFarland, Michael J., (Sociology professor)

**MEMBER (Committee Member):**Waggoner, Miranda R.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Social Sciences and Public Policy

**CORPORATE NAME:**Department of Sociology

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2018

**PHYSICAL DESCRIPTION:**1 online resource (131 pages)

**ABSTRACT:**Why are sex differences in internalizing mental health disorders such as depression and externalizing health behaviors such as alcohol problems frequently documented? Despite these reported differences between men and women, what accounts for the wide variation in these health outcomes within sex? Theories of gender role orientation have provided explanations for these gaps, but empirical support is mixed. In this dissertation, I propose an alternative model where the sex-linked personality traits from the BIS/BAS systems inform sex differences and intra-sex variation in two contrasting health outcomes: depressive symptoms and alcohol use problems. I analyze the potential mediating and moderating effects of the BIS/BAS on the relationships between stress and health outcomes in a sample of 1,713 young adults in Miami-Dade County, Florida. Elevated BIS traits among women account for 20 percent of the sex gap in depressive symptoms and exacerbate the effects some social stressors on depressive symptoms. BIS/BAS do not inform sex differences in alcohol use problems, however elements of the BAS traits strongly predict the alcohol behaviors of both sexes, while BIS traits moderate the stress-alcohol relationship among women in contrasting ways. Additionally, the BIS/BAS traits do not operate consistently when considered within race/ethnicity. The results provide a window into the role that individual variation in personalities can contribute to the understanding of important intra-sex and inter-sex variation in the stress process.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Sociology in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Fall Semester 2018.

**NOTE (Date of Defense):**November 28, 2018.

**NOTE (Keywords):**alcohol use/abuse, BIS/BAS, depressive symptoms, stress

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**John Taylor, Professor Directing Dissertation; Christopher J. Coutts, University Representative; Michael J. McFarland, Committee Member; Miranda R. Waggoner, Committee Member.

**SUBJECT:**Sociology

**DEGREE:**Doctoral

**Record number: 98**

**FILENAME:**Kim\_fsu\_0071E\_15079.pdf

**TITLE:**Principles-Based Accounting Standards and Regulatory Enforcement

**AUTHOR:**Kim, Mark P.

**MEMBER (Professor Directing Dissertation):**Morton, Richard M.

**MEMBER (University Representative):**Autore, Donald M.

**MEMBER (Committee Member):**Billings, Bruce K.

**MEMBER (Committee Member):**Pierce, Spencer R.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Business

**CORPORATE NAME:**Department of Accounting

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (74 pages)

**ABSTRACT:**Practitioners claim that rules-based accounting standards create a safe harbor with respect to liability risk. In contrast, regulators argue that principles-based reporting norms better protect preparers and auditors from undue enforcement threats due to its emphasis on substance over form (SEC, 2003). I add to this debate with a proprietary dataset of accounting oversight from South Korea in conjunction with their mandated adoption of IFRS in 2011. This dataset, which archives investigative details and enforcement actions related to accounting allegations, allows me to infer whether a switch to more principles-based IFRS reporting amplifies enforcement risk. My results suggest that IFRS enforcements are associated with a higher propensity of violation detections. Compared to K-GAAP violations, I also find that stock price discounts and earnings response coefficient declines are more pronounced when violations are announced under IFRS regimes. Collectively, these results are relevant in light of the FASB's and IASB's joint proposal advocating a more principles-based approach to standard setting (FASB, 2002, 2010).

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Accounting in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 2, 2019.

**NOTE (Keywords):**Enforcement, IFRS, Principles-based standards, Rules-based standards, Safe harbor, Substance over form

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Richard M. Morton, Professor Directing Dissertation; Donald M. Autore, University Representative; Bruce K. Billings, Committee Member; Spencer R. Pierce, Committee Member.

**SUBJECT:**Accounting

**SUBJECT:**Economics

**DEGREE:**Doctoral

**Record number: 99**

**FILENAME:**Kim\_fsu\_0071E\_15158.pdf

**TITLE:**Essays on U.S. Renewable Energy and Local Sustainability Policy

**AUTHOR:**Kim, Seoyoung Serena

**MEMBER (Professor Directing Dissertation):**Feiock, Richard C.

**MEMBER (University Representative):**Barrilleaux, Charles

**MEMBER (Committee Member):**Brower, Ralph S.

**MEMBER (Committee Member):**Yang, Kaifeng

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Social Sciences and Public Policy

**CORPORATE NAME:**Askew School of Public Administration and Policy

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (110 pages)

**ABSTRACT:**The first chapter examines what motivates airports to deploy on-site solar PV system. Currently, over 20% of U.S. public airports have adopted solar photovoltaic (PV) on their property. Yet, the vast majority of research on solar energy adoption focuses on state, local, or individual levels, largely overlooking one of the most utilized public properties for solar PV—airports. Combining a unique dataset of 488 U.S. public airports and interviews with managers at four key airports, this paper investigates why and to what degree (i.e., capacity generated) do airports deploy on-site solar PV systems. Findings suggest state-operated airports are more likely to adopt solar PV, airports in the service area of cooperatives are less likely to deploy solar PV, and the level of connectivity to other airports in airport associations positively correlates to solar PV adoption and capacity. Airport governance, support from electric utilities, and renewable policy incentives are also important factors influencing solar and renewable energy development. Policy and management implications for renewable energy deployment at airports and other publicly-used properties are discussed. Insight for future research on the general linkage between governance structure and renewable energy development is considered. The second chapter examines make-or-buy decisions (i.e., providing in-house or contracting out) in financing solar PV projects at U.S. airports. Airports are one of the fastest growing adopters of solar photovoltaic (PV) energy systems, but little is known about how airports finance solar projects. Financing arrangements can influence long-term economic viability and cost-benefit distribution of solar projects. Based on the transaction cost approach, this paper hypothesizes that make-or-buy decisions for solar projects are shaped by airport governance structure, utility ownership, state policies, and renewable market conditions. Hypotheses are examined through multinomial logistic analysis, using data from all U.S. airports that have adopted a solar PV project as of June 2018. The analysis finds that airports operated by special-purpose governments are more likely to own and self-operate solar systems, while airports in the service area of investor-owned utilities are more likely to lease land for a solar project. Statewide renewable energy regulations and solar market conditions are also important factors influencing make-or-buy decisions. This chapter has implications for solar PV policy design, taking into account positive externalities of renewable energy projects given institutional environments. The third chapter examines how local government organizational characteristics and management activities relate to public-nonprofit collaboration and perceived performance in local sustainability. Local governments have been increasingly responsible for promoting sustainability, but we are only beginning to learn how organizational characteristics and management activities influence local sustainability policy. Using 2015 sustainable cities survey data and case studies in the U.S., this study finds that public-nonprofit collaboration in sustainability is positively associated with perceived inter-departmental competition and functional fragmentation. It is also found that perceived sustainability performance is positively correlated with public-nonprofit collaboration, functional fragmentation, and performance information use. However, the relationship between performance information use and perceived performance is nonlinear, indicating that the effect of performance information use on perceived performance has an inverse u-shape. Performance information use in highly fragmented administrative arrangements may be negatively related to perceived sustainability performance. Implications for local sustainability implementation are discussed.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Askew School of Public Administration and Policy in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**2019.

**NOTE (Date of Defense):**[Date awarded not present on Dissertation].

**NOTE (Keywords):**airport governance, bureaucratic competition, local sustainability, performance information, renewable energy policy, special purpose governance

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Richard C. Feiock, Professor Directing Dissertation; Charles Barrilleaux, University Representative; Ralph S. Brower, Committee Member; Kaifeng Yang, Committee Member.

**SUBJECT:**Public policy

**SUBJECT:**Sustainability

**SUBJECT:**Force and energy

**DEGREE:**Doctoral

**Record number: 100**

**FILENAME:**Kim\_fsu\_0071E\_15176.pdf

**TITLE:**Private, Public, and Collaborative Engagements in Environmental Issues

**AUTHOR:**Kim, Minjung

**MEMBER (Professor Directing Dissertation):**Coleman, Eric A., (Professor of Political Science)

**MEMBER (University Representative):**Coutts, Christopher

**MEMBER (Committee Member):**Gomez, Brad T., 1970-

**MEMBER (Committee Member):**Pietryka, Matthew T.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Social Sciences and Public Policy

**CORPORATE NAME:**Department of Political Science

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (75 pages)

**ABSTRACT:**This dissertation analyzes the conditions under which individual environmental behaviors, government environmental regulations, and collaborative environmental policy networks occur. Although numerous studies have investigated these various types of environmental engagements, they tend to rely on general assumptions with major limitations. The first essay of this dissertation tests the effects of an individual’s environmental attitudes on private environmental behavior, instrumenting for the endogeneity of attitude measures. The second essay studies the predictors of city governments’ adoption of flexible environmental regulations, based on the new perspective that pro-environmental institutions can be tools for economic growth. The first essay examines the causal relationships between individuals’ environmental attitude and their environmental behavior. Unlike the prevalent approach in the literature assuming the direct causal relationship of environmental attitude to behavior, I propose a new model that presents an instrument for the endogenous attitude measures. Empirical results are mixed. People who are more concerned about climate change are more likely to use green products, while they do not recycle more. These diverging results of the two behavioral variables considered to be the most environmental suggest substantial differences among the private environmental actions. Environmental attitudes consistently predict certain environmental behaviors, but they have no effect on other environmental behaviors. In addition, the positive and significant effects of environmental attitudes on some non-environmental private actions indicate the possibility of the social desirability bias of attitude measures. The overall results show that the causal effects of environmental attitudes on environmental behaviors are not simple and consistent as generally assumed. The second essay studies the reasons for the different levels in the city governments’ adoption of energy-efficient land-use policies. Extant work presumes a conflicting and competing relationship between economic growth and environmental conservation. My approach differs from traditional presumption by looking at environmental land-use plans as the institutional tools for economic development. This essay tests the hypothesis that cities that need green business to achieve their economic prosperity would implement more environmentally friendly land-use plans. The estimated effect shows that the more important the green business is for the city’s economic growth, the more likely the city will adopt general energy-efficient land-use plans. The empirical results in the second essay show that the different levels of adopting environmental institutions in the cities can be explained by diverse paths to achieving the economic growth of each city.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Political Science in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 11, 2019.

**NOTE (Keywords):**Environmental attitude, Environmental behavior, Environmental policy, Institutions, Policy networks, Survey research

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Eric A. Coleman, Professor Directing Dissertation; Christopher Coutts, University Representative; Brad T. Gomez, Committee Member; Matthew T. Pietryka, Committee Member.

**SUBJECT:**Political science

**SUBJECT:**Public policy

**DEGREE:**Doctoral

**Record number: 101**

**FILENAME:**Kopperstad\_fsu\_0071N\_14973.pdf

**TITLE:**Integrated Experimental and Numerical Study of Compliant Floating Offshore Wind Turbines

**AUTHOR:**Kopperstad, Karsten Mikal

**MEMBER (Professor Co-Directing Thesis):**Koroush, Shoele

**MEMBER (Professor Co-Directing Thesis):**Kumar, Rajan

**MEMBER (Committee Member):**Oates, William

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**FAMU-FSU College of Engineering

**CORPORATE NAME:**Department of Mechanical Engineering

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (89 pages)

**ABSTRACT:**Wind-based renewable energies are among the fastest growing within the energy sector, with the vast majority of wind power generated from onshore wind farms. Floating offshore wind turbines (FOWT) have been proposed as alternative to the conventional onshore systems. Compared with their land-based counterparts, FOWT possess clear advantage in their easy access to stronger and steadier wind and their mitigated impact on human society. Several concepts of FOWT have been proposed. Among them, the so called barge type and spar type floating structures. Experimental and numerical studies were conducted in order to investigate the fluid dynamics associated with these compliant structures and what additional consideration future offshore wind farm designers need to consider in the initial planning phase of a wind farm configuration. Based on disk actuator theory, a series of computational fluid dynamics and experimental studies were conducted on a actuator disk model as a cost effective simulation tool for these types of turbines. For the computational efforts, the actuator disk model was represented by a circular actuator disk that was discretized with an unstructured two-dimensional triangular mesh in a structured three-dimensional fluid domain. For experimental studies, the actuator disk model was represented by an additive manufactured, uniform, and porous disk designed to apply decelerating forces on the incoming fluid. From force measurements conducted in an open-loop, low-speed wind tunnel facility, a drag coefficient was derived. The drag coefficient was then implemented into a computation flow solver. Using stereo particle imaging velocimetry, results from the computational studies were verified by means of average velocity deficit. Once validation was obtained, calculations of the motion based on three different sea states that the floating structures would be subjected to were carried out. The resulting motion was implemented into the flow solver and the resulting wake and time histories of power and drag force were analyzed. CFD results were obtained using laminar and turbulent inflow conditions. The results from the study suggest that the effect of the oscillation of the wind turbine seems to be overpowered by the inflow conditions. For the barge type floating platform, slight improvements in wake recovery is observed at a cost of higher standard deviation of power and lower mean power values. Mean power values for the spar type floating structure remains constant with increasing sea states. Both floating platforms is observed to increase overall turbulent mixing in the far wake regime.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the Department of Mechanical Engineering in partial fulfillment of the requirements for the degree of Master of Science.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**January 25, 2019.

**NOTE (Keywords):**Cable dynamics, Floating Offshore Wind Turbine, Hywind OC3, ITI Barge, Wake, Wave/platform interaction

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Shoele Koroush, Professor Co-Directing Thesis; Rajan Kumar, Professor Co-Directing Thesis; William Oates, Committee Member.

**DEGREE:**Masters

**Record number: 102**

**FILENAME:**KORKUC\_fsu\_0071N\_15234.pdf

**TITLE:**A Preliminary Analysis of Artifacts and Area Usage Associated with the Spanish Fort at San Luis de Talimali (8LE4), Leon County, Florida

**AUTHOR:**Korkuc, David J. (David Jason)

**MEMBER (Professor Directing Thesis):**Peres, Tanya M.

**MEMBER (Committee Member):**Marrinan, Rochelle A.

**MEMBER (Committee Member):**Mehta, Jayur M.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Anthropology

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (88 pages)

**ABSTRACT:**Located in what is now Tallahassee, Florida is the former site of a Spanish mission named San Luis de Talimali (8LE4). This area was colonized by the Spanish in the heart of Apalachee territory and became an important component of Spanish rule: religiously, economically, agriculturally, and militarily. The Spanish Crown supported Franciscan missionaries to convert and pacify local Indians, while the military protected Spanish interests by defending the locals from English and French raids and quelled any uprisings. To this end, several forts were constructed, not only at San Luis de Talimali, but in several outlying areas as needed. At the fall of the Spanish mission system in the early eighteenth century, these forts were destroyed, either by the invading party or by the Spanish themselves to prevent their being useful to the enemy. Fort San Luis was no exception. In 1704, with the British army and their Creek Indian allies only days away, the soldiers at San Luis set fire to the fort complex and church before retreating east towards St. Augustine. San Luis de Talimali, as well as the Apalachee Nation, never recovered. The ruins of the fort complex would eventually be the source of treasures for antiquity hunters, as remnants of the once-powerful fortification produced cannon and other military artifacts. Starting in 1940, professional archaeologists conducted scientific excavations, and the land was purchased by the State of Florida in 1983. The most extensive archaeological project to excavate the ruins of Fort San Luis was conducted from 1998-2002, while the assemblage produced from those excavations provides artifact and spatial data. This thesis researches and demonstrates preliminary results of that analysis, with 450 of the 1700 field samples analyzed. The purpose of this thesis is to publish a detailed analysis of the artifacts recovered during the 1998-2002 excavations of the fort and blockhouse area and combine this analysis with previously published excavation data of the San Luis fort and blockhouse complex. I will use these new data to produce artifact distribution maps of the fort complex to determine usage areas within the blockhouse and make comparisons to published data from contemporaneous Spanish forts located throughout Spanish Florida.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the Department of Anthropology in partial fulfillment of the requirements for the degree of Master of Science.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 9, 2019.

**NOTE (Keywords):**Florida, Fort San Luis, Mission, San Luis de Talimali, Spanish, Tallahassee

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Tanya M. Peres, Professor Directing Thesis; Rochelle A. Marrinan, Committee Member; Jayur M. Mehta, Committee Member.

**SUBJECT:**Archaeology

**DEGREE:**Masters

**Record number: 103**

**FILENAME:**Krusemark\_fsu\_0071N\_15235.pdf

**TITLE:**Two Sides of the Same Coin: Influences on Biracial Identification

**AUTHOR:**Krusemark, Danielle R.

**MEMBER (Professor Directing Thesis):**Plant, Ashby

**MEMBER (Committee Member):**McNulty, James

**MEMBER (Committee Member):**Hart, Sara, (Professor of Psychology)

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Psychology

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (72 pages)

**ABSTRACT:**We propose a model of biracial identification that incorporates biracial individuals’ closeness to each racial group of their background, the biracial individuals’ engagement with the culture associated with each racial group of their background, and others’ perceptions of the biracial individual’s racial identity as predictors. In testing our model, we set out to (1) examine multiple predictors simultaneously, (2) include biracial individuals’ personal identity-related behavior (i.e., cultural engagement) as a predictor, (3) rigorously test our model across multiple different assessments of biracial identification, and (4) investigate antecedents of the predictors of biracial identification in an attempt to clarify the literature. Study 1’s findings support previous research and demonstrate that closeness and others’ perceptions were important predictors of Black/White biracial identity. Study 2’s findings demonstrate that explicit biracial identification among Latino(a)/Caucasian individuals was predicted by how others perceive the biracial individual, how close the biracial individual was to Latino(a) people, and how often the biracial individual engaged with Latino(a) culture (via speaking Spanish). Our results hold implications for altering biracial identification and biracial individuals’ behavior with members of their parents’ races.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Thesis submitted to the Department of Psychology in partial fulfillment of the requirements for the degree of Master of Science.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 9, 2019.

**NOTE (Keywords):**biracial identification, biracial identity, biracial individuals, implicit identification

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Elizabeth Ashby Plant, Professor Directing Thesis; Jim McNulty, Committee Member; Sara Hart, Committee Member.

**SUBJECT:**Psychology

**DEGREE:**Masters

**Record number: 104**

**FILENAME:**Lacey\_fsu\_0071E\_15154.pdf

**TITLE:**Student Development and Studio Management in Applied Music Teaching through Implementation of the Situational Leadership Model

**AUTHOR:**Lacey, Jonathan M. (Jonathan Marlon)

**MEMBER (Professor Directing Treatise):**Drew, John Robert, 1951-

**MEMBER (University Representative):**Clary, Richard

**MEMBER (Committee Member):**Moore, Christopher, 1965-

**MEMBER (Committee Member):**Stebleton, Michelle

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (33 pages)

**ABSTRACT:**Situational Leadership is a business management model that has been used in many of the top Fortune 500 companies, the United States Military, and educational administration since the early 1980s. This model provides a simplified approach for managers leading various levels of employees. The focus of this treatise will be to show how an applied professor can incorporate this model into his/her approach when working on studio management and student development. The four categories, or Developmental Levels (D1, D2, D3, and D4), of Situational Leadership are each defined by two rubrics: Competency and Commitment. Level One is Low Competency-High Commitment and describes a student that is new but eager to learn. Level Two is Low Competency-Low Commitment and could be a younger student who is not as interested in a particular task. Level Three is High Competency-Variable Commitment. This would describe a student with fine skills but may feel stagnant or one whose buy-in could waver. Level Four is High Competency-High Commitment and might describe a student that is more experienced and takes school and their future career more seriously. The teacher’s Leadership Styles (S1, S2, S3, and S4) would then vary based on the needs of the student defined by two rubrics: Support and Direction. Competency and Commitment level of the individual student would have a specific correlation to the amount of Support necessary to affect Commitment and Direction necessary to affect Competency. The Leadership Styles correspond to Development Levels in such a manner to optimize the teacher-student relationship.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Treatise submitted to the College of Music in partial fulfillment of the requirements for the degree of Doctor of Music.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 12, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**John Drew, Professor Directing Treatise; Richard Clary, University Representative; Christopher Moore, Committee Member; Michelle Stebleton, Committee Member.

**SUBJECT:**Music

**DEGREE:**Doctoral

**Record number: 105**

**FILENAME:**Lai\_fsu\_0071E\_15055.pdf

**TITLE:**Tuning Intertwined Energy Scales in f-Electron Systems by Chemical Substitution

**AUTHOR:**Lai, You

**MEMBER (Professor Co-Directing Dissertation):**Baumbach, Ryan E.

**MEMBER (Professor Co-Directing Dissertation):**Xiong, Peng

**MEMBER (University Representative):**Shatruk, Mykhailo

**MEMBER (Committee Member):**Graf, David

**MEMBER (Committee Member):**Schlottmann, Pedro U.

**MEMBER (Committee Member):**Riley, Mark A.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Physics

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (126 pages)

**ABSTRACT:**Materials that contain $f$-electron elements often exhibit complex phase diagrams with different phenomena including nematic electronic states, charge and spin instabilities, the breakdown of Fermi liquid behavior, and unconventional superconductivity. This diversity of behavior is related to the fine balance between several factors including the magnetic exchange, Kondo effect, crystal electric field splitting and strong spin-orbit coupling. As a result, many such systems exhibit intertwined order parameters that are controllable through pressure, magnetic field, and chemical substitution. Here, we report results from chemical substitution studies in three distinct Kondo lattice systems. In each case, we are able to suppress an ordered state towards zero temperature at a possible quantum phase transition and study the resulting behavior. For CeCu$\_2$Si$\_2$, Si $\rightarrow$ P chemical substitution compresses the unit cell volume while adding $s/p$ electrons. This encourages complex magnetism and drives the system away from a quantum critical point. These results are understood by considering that the electronic hybridization between the $f$- and conduction electrons in this system is controlled by nearly independent parameters of unit cell volume and $s$; $p$; $d$ shell filling, which drive the system's behavior along different axes. For CePd$\_2$P$\_2$, Pd $\rightarrow$ Ni substitution suppresses the ferromagnetism towards a disordered ferromagnetic QCP at $x\_{\rm{cr}}$ = 0.7, where the breakdown of Fermi liquid behavior is observed. We also find that for CePd$\_2$P$\_2$, a pressure of $P\_{\rm{c}}$ = 12 GPa would likely be sufficient to access a quantum phase transition. These results provide a useful experimental testbed for the Belitz-Kirkpatrick-Vojta (BKV) theory. For UCr$\_2$Si$\_2$, Cr $\rightarrow$ Ru substitution results in filling of the $d$-shell without significantly changing the unit cell volume. This suppresses the antiferromagnetic order $T\_{\rm{N}}$ ($T\_{\rm{N}}$ $\approx$ 24 K for UCr$\_2$Si$\_2$) and the structural phase transition $T\_{\rm{S}}$ ($T\_{\rm{S}}$ $\approx$ 200 K for UCr$\_2$Si$\_2$) that are seen in the parent compound. $T\_{\rm{N}}$ approaches zero temperature near $x\_{\rm{c, N}}$ = 0.08 while $T\_{\rm{S}}$ reaches a minimum value near $x\_{\rm{c, S}}$ = 0.16, after which the structural phase transition disappears for larger $x$. Near this concentration there is evidence for the breakdown of Fermi liquid behavior in the transport and heat capacity measurements, suggesting that this may be a model system for studying a lattice instability at zero temperature, its relationship to a nearby antiferromagnetic quantum critical point, and the resulting impact on electronic properties and lattice modes in a strongly correlated electron metal.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Physics in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 28, 2019.

**NOTE (Keywords):**Chemical Substitution, Quantum Criticality, Strongly Correlated Materials

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Ryan E. Baumbach, Professor Co-Directing Dissertation; Peng Xiong, Professor Co-Directing Dissertation; Mykhailo Shatruk, University Representative; David Graf, Committee Member; Pedro Schlottmann, Committee Member; Mark Riley, Committee Member.

**SUBJECT:**Physics

**SUBJECT:**Condensed matter

**DEGREE:**Doctoral

**Record number: 106**

**FILENAME:**Leasure\_fsu\_0071E\_15113.pdf

**TITLE:**The Relationship between the Big Five Personality Factors and the Complexity of the Career Decision Space

**AUTHOR:**Leasure, Kathryn K. (Kathryn Keleen)

**MEMBER (Professor Directing Dissertation):**Osborn, Debra S., 1968-

**MEMBER (University Representative):**Guthrie, Kathy L.

**MEMBER (Committee Member):**Peterson, Gary W.

**MEMBER (Committee Member):**Sampson, James P.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Education

**CORPORATE NAME:**Department of Educational Psychology and Learning Systems

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (102 pages)

**ABSTRACT:**This study used the NEO-FFI (Costa & McCrae, 1992) and the Decision Space Worksheet (DSW; Peterson, Lenz, & Osborn, 2016) to examine the relationship between personality and the complexity of the career decision space. The sample included 95 undergraduate students enrolled in 5 sections of a career planning course at a large southeastern university. The NEO-FFI was used to measure the Big Five domains of personality. The DSW was used to measure the frequency of endorsement to a content category and the magnitude, or area, devoted to the content category. Correlation, multiple regression, and exploratory factor analyses were used to analyze the data. A Pearson Product Moment correlation resulted in a significant positive relationship between Conscientiousness and the frequency of the content category Opportunities. Negative relationships were found between both Openness and Conscientiousness and the content category of Higher Order. When the correlation between the NEO-FFI and the magnitude of DSW content categories was tested, a significant relationship was found between Neuroticism and Higher order. There were no significant correlations found between the NEO-FFI personality factors and the total magnitude of used space for the categories on the DSW. Findings of a multiple regression analysis revealed Opportunity and Higher Order predict Extroversion, Openness, and Conscientiousness. Thus, Extroversion, Openness, and Conscientiousness appear to exercise influence on the frequency of content category endorsements of Opportunity and Higher Order. However, there was no influence found between the NEO-FFI factors and the magnitude of the content categories on the DSW. An Exploratory Factor Analysis found shared variation between Conscientiousness and the frequency of DSW content categories Higher Order and Close Personal. There was no shared variation between the NEO-FFI personality factors and the magnitude of any of the content categories on the DSW. An analysis and discussion of the findings are provided, along with implications for theory, practice, and research.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Educational Psychology and Learning Systems in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 28, 2019.

**NOTE (Keywords):**Big Five, Career Decision Making, Complexity, Problem Space, Readiness

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Debra Osborn, Professor Directing Dissertation; Kathy Guthrie, University Representative; Gary W. Peterson, Committee Member; James P. Sampson, Jr., Committee Member.

**SUBJECT:**Psychology

**DEGREE:**Doctoral

**Record number: 107**

**FILENAME:**Lehmann\_fsu\_0071E\_13957.pdf

**TITLE:**Race, Ethnicity, Threat, and the Sentencing of Transferred Juveniles in Florida Criminal Courts

**AUTHOR:**Lehmann, Peter S.

**MEMBER (Professor Directing Dissertation):**Chiricos, Theodore G. (Theodore George), 1942-

**MEMBER (University Representative):**Taylor, Jeanette E

**MEMBER (Committee Member):**Bales, William D.

**MEMBER (Committee Member):**Hay, Carter H.

**MEMBER (Committee Member):**Stults, Brian J

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Criminology and Criminal Justice

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (173 pages)

**ABSTRACT:**In response to public fears surrounding an anticipated rise in youth crime, several forms of punitive juvenile justice legislation were implemented during the “get tough” era of the 1980s and 1990s. In many jurisdictions, some of these policies involved the expansion of the mechanisms by which youth offenders could be transferred from the juvenile justice system to the adult criminal court. Scholars have theorized that the proliferation of juvenile transfer was largely intended to be a means of social control over Black and Hispanic youth, and previous research has reported that commonly-held conceptual associations between race/ethnicity and juvenile offending are connected to fear of crime and punitive sentiments. Further, prior studies have observed that minority youth are more likely than Whites to be transferred to the adult court and also receive harsher sentencing outcomes following transfer. However, little extant research explores how transferred youth are sentenced in the criminal court relative to adult offenders, and no prior study has investigated whether individual-level race/ethnicity as well as county-level racial/ethnic context might condition the effects of juvenility on sentencing severity such that transferred youth are disadvantaged. Using multilevel modeling techniques to analyze data on felony offenders sentenced in Florida circuit courts between 1995 and 2006, the present study first examines whether juvenile status is positively or negatively associated with a sentence to jail or prison as well as sentence length. Next, these analyses explore whether race/ethnicity as well as both race/ethnicity and gender condition the effects of juvenility on these outcomes such that Black and Hispanic transfers, and especially minority males, are sentenced particularly harshly. Finally, in light of the minority threat perspective, this study assesses the interactive influence of transferred juvenile status and county-level racial/ethnic population composition and growth on sentencing severity. Supplementary analyses are also conducted which examine whether the cross-level interaction effects between juvenility and static and dynamic racial/ethnic context are further conditioned by the race or Hispanic ethnicity of offenders. The results indicate that the independent effects of transferred juvenile status are mixed, and juveniles are more likely than adults of various ages to receive sentences to incarceration but receive shorter jail and prison sentences. Interactive relationships between race/ethnicity and juvenility are also observed such that Black and Hispanic transfers are especially likely to receive sentences to incarceration. Further, minority male transferred juveniles are penalized particularly harshly in sentences to jail. The findings regarding the conditional effects of static and dynamic racial/ethnic threat are somewhat inconsistent, but much of the evidence suggests that transferred youth are disadvantaged relative to adults in counties with a greater minority presence and, especially, minority population growth. Further, these targeted effects of county-level racial/ethnic context are found to be stronger among Black and Hispanic offenders than among Whites. Overall, the findings provide support for this study’s theoretical expectations and suggest that sentencing disparities between transferred juveniles and adults are closely connected to race and ethnicity.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the College of Criminology and Criminal Justice in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 5, 2019.

**NOTE (Keywords):**Criminal court, Juvenile transfer, Race and ethnicity, Sentencing

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Ted Chiricos, Professor Directing Dissertation; John Taylor, University Representative; William D. Bales, Committee Member; Carter Hay, Committee Member; Brian J. Stults, Committee Member.

**SUBJECT:**Criminology

**DEGREE:**Doctoral

**Record number: 108**

**FILENAME:**Lencina\_fsu\_0071E\_15051.pdf

**TITLE:**Giving Voice to the Voiceless: Testimonies of Stolen Babies' Victims during the Francoist Dictatorship and Democracy

**AUTHOR:**Lencina, Maravillas

**MEMBER (Professor Co-Directing Dissertation):**Cappuccio, Brenda L.

**MEMBER (Professor Co-Directing Dissertation):**Poey, Delia

**MEMBER (Committee Member):**Galeano, Juan Carlos, 1958-

**MEMBER (University Representative):**Suárez, Virgil, 1962-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Modern Languages and Linguistics

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (214 pages)

**ABSTRACT:**The subject of my doctoral dissertation is the abduction and illegal adoptions of children of Republican parents during the Franco dictatorship (1939-1975) and the continued struggle of thousands to acknowledge and resolve this violation by the current Spanish leadership. While my primary focus is the Franco regime, my research has the potential to impact and support the efforts of thousands of women across the globe who have been violated similarly in places like Ireland, Argentina, Serbia, Colombia, Mexico, Guatemala, Thailand, South Africa and Australia. Tragically, the abuse inflicted to women and children has no boundaries. The goal of this project is to help shed light upon both the historical atrocities perpetrated during the Franco Regime and the official denial, indifference and inaction of the current government in Spain today towards these victims and their survivors. At a global level, it can embolden victims in other countries to share their stories without fear of denial or outright dismissal. Like all dictators, General Franco refused to tolerate any dissidence or opposition. He crushed any such dissent through executions and imprisonment. Many of those executed or imprisoned were mothers with small children or pregnant women. They were deemed to be “unfit” to raise children due to their real or perceived lack of support for Franco’s regime. His goal was to separate children from parents with different beliefs and to reeducate them. These children were then illegally put up for adoption and placed with “proper” Francoist supporters. Franco and his sycophants believed that this would allow the children to be reformed and indoctrinated to become adults with acceptable Nationalist-Catholic beliefs and ideology supportive of Franco. Many babies were taken directly from their mothers at birth, told the baby was dead and sold to politically preferred families. This deceitful, ruthless and illegal activity continued well into the 1990s during democracy. What started as a way of eliminating opposing ideologies and ensuring repression evolved into a very lucrative business, supported and encouraged by members of the church, doctors and judges who became personally wealthy as a result. As part of my research, I conducted interviews with the mothers whose babies were taken from them, and with the babies, now adults, who are desperately seeking answers about their true identity and biological family. This topic has only recently emerged into the mainstream consciousness and discourse. Since there is not a Truth and Reconciliation Commission set up in Spain to make this information accessible to the public, my research, which consists in large part of on-site research and participative interviews, will help develop and share an accurate and more fully nuanced portrait of the current struggle for resolution by its victims in Spain and everywhere that women fight this same struggle for justice and truth.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Modern Languages and Linguistics in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 8, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Brenda Cappuccio, Professor Co-Directing Dissertation; Delia Poey, Professor Co-Directing Dissertation; Virgil Suárez, University Representative; Juan Carlos Galeano, Committee Member.

**SUBJECT:**Literature

**DEGREE:**Doctoral

**Record number: 109**

**FILENAME:**Lengyel\_fsu\_0071E\_15156.pdf

**TITLE:**Search for Electrically Ordered Phases in Hydrogen-Bonded Molecular Cocrystals

**AUTHOR:**Lengyel, Jeffrey William

**MEMBER (Professor Co-Directing Dissertation):**Dalal, Naresh S.

**MEMBER (Professor Co-Directing Dissertation):**Shatruk, Mykhailo

**MEMBER (University Representative):**Hill, S. (Stephen Olof)

**MEMBER (Committee Member):**Albrecht-Schmitt, Thomas E.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Chemistry and Biochemistry

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (86 pages)

**ABSTRACT:**Hydrogen bonds are an important type of non-covalent bonding intermolecular interactions with many applications in the design of molecular materials for pharmaceuticals and organic electronics. Due to the relative strength of hydrogen bonds when compared to other intermolecular interactions, the crystal packing of molecular materials is highly influenced by their presence. The strength of hydrogen bonds in cocrystals of two molecular components correlates to the difference in pKa values of the components, following an empirical trend known as the “ΔpKa rule”. In some cases where ΔpKa is small, the proton composing the hydrogen bond can be transferred between acid and base reversibly. Due to the inherent dipole in asymmetric hydrogen bonds, reversible proton transfer may give rise to a reversible polarization necessary to achieve ferroelectricity. In this work we have constructed a database of organic acids and bases with their associated pKa values in order to explore possible two component combinations to achieve functionalized proton transfer. The database of synthons with pKa values was organized into a matrix of ΔpKa values for each combination. Several of these combinations with small ΔpKa values were synthesized and crystals were grown and characterized, primarily through single-crystal X-ray diffraction. From the resulting structures a few common packing motifs were identified. One combination, the hydrated salt of squaric acid and 2,3-dimethylpyrazine, was identified as an antiferroelectric with a phase transition at 104 K. The mechanism of this phase transition was investigated through powder X-ray diffraction, single-crystal neutron diffraction, Raman spectroscopy, heat capacity, and dielectric measurements. Besides reversible proton transfer, hydrogen bonds may also be used to template supramolecular structures. Thiourea can form 1-D hexagonal channels around guest molecules. Due to the variable strength of the hydrogen bond, the diameter of these channels is dependent on the size and shape of the guest molecule. To explore the effects of this templating on the guest molecules properties we synthesized cocrystals of thiourea with the magnetic radical molecules TEMPO and 4-oxo-TEMPO.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Chemistry and Biochemistry in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 8, 2019.

**NOTE (Keywords):**Cocrystals, Crystallography, Host-Guest Complexes, Hydrogen Bonding, Organic Antiferroelectrics, Organic Magnetism

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Naresh Dalal, Professor Co-Directing Dissertation; Michael Shatruk, Professor Co-Directing Dissertation; Stephen Hill, University Representative; Thomas E. Albrecht-Schmitt, Committee Member.

**SUBJECT:**Chemistry

**DEGREE:**Doctoral

**Record number: 110**

**FILENAME:**Li\_fsu\_0071E\_15019.pdf

**TITLE:**Solid-State NMR Studies on Battery Materials

**AUTHOR:**Li, Xiang

**MEMBER (Professor Directing Dissertation):**Hu, Yan-yan

**MEMBER (University Representative):**Zheng, Jianping

**MEMBER (Committee Member):**Marshall, Alan G. (Alan George), 1944-

**MEMBER (Committee Member):**Zhu, Lei, 1978-

**MEMBER (Committee Member):**Yu, Zhibin

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Chemistry and Biochemistry

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (117 pages)

**ABSTRACT:**As society demand for energy continues to rise, advanced electrochemical energy storage technologies are needed to address the challenges associated with effectively using the rechargeable energy as the alternative source to fossil fuels. Various types of alkali-ion rechargeable batteries have attracted notable attentions. The specific capacity of these batteries is mainly limited by the cathode materials. Among them, Lithium ion batteries have the desirable combination of high energy density and power density, making them the most popular energy storage technique in worldwide applications, such as in cell phone, electric cars. Extensive studies have been done to improve the specific capacity by searching for high energy-density cathode materials. The capacities of LIBs are limited by cathodes. Sodium-ion batteries (SIBs) are an emerging electrochemical energy storage technology that has high promise for electrical grid level energy storage. High capacity, long cycle life, and low cost cathode materials are very much desired for the development of high performance SIB systems. Sodium manganese oxides with different compositions and crystal structures have attracted much attention because of their high capacity and low cost. Nuclear Magnetic Resonance (NMR) is a powerful tool to determine the nuclear (Li, Na, O, etc) local structural environments.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Chemistry and Biochemistry in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 25, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Yan-Yan Hu, Professor Directing Dissertation; Jianping Zheng, University Representative; Alan G. Marshall, Committee Member; Lei Zhu, Committee Member; Zhibin Yu, Committee Member.

**SUBJECT:**Chemistry

**DEGREE:**Doctoral

**Record number: 111**

**FILENAME:**Li\_fsu\_0071E\_15111.pdf

**TITLE:**An Annotated Catalogue and Guide to the Piano Solo Repertoire of Contemporary Asian Women Composers from Mainland China, Hong Kong, and Taiwan

**AUTHOR:**Li, Chun (Paige)

**MEMBER (Professor Directing Treatise):**Gainsford, Read

**MEMBER (University Representative):**Clendinning, Jane Piper

**MEMBER (Committee Member):**Dumlavwalla, Diana Teresa

**MEMBER (Committee Member):**Kalhous, David, 1975-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (172 pages)

**ABSTRACT:**This treatise provides an annotated catalogue of solo piano repertoire by currently living women composers who were born in the second half of the twentieth century and are from mainland China, Hong Kong, and Taiwan. It serves as a practical reference source and guide to this literature. The first chapter discusses the current situation for Asian women composers and the significance of this study. The second chapter is a catalogue of the composers and their solo piano works that I collected for this study. Biographical information and descriptive summaries of the pieces allow performers, teachers, and scholars to easily survey this particular repertoire, choose pieces for study and performance, and discover new works. The final chapter provides critical commentary and offers my observations on sources of inspiration and elements of musical style in the collected repertoire. The appendix includes a table of composers and works for readers to locate pieces quickly based on the origin of the composer or the level of difficulty and duration of the piece. This project contributes to a growing body of recent scholarship on new music by Asian composers. It aims to introduce more of this repertoire into the general piano literature so that the music of Asian women composers can be discussed and performed more regularly.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Treatise submitted to the College of Music in partial fulfillment of the requirements for the degree of Doctor of Music.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 16, 2019.

**NOTE (Keywords):**Asian Women Composer, China, Hong Kong, Solo Piano Repertoire, Taiwan

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Read Gainsford, Professor Directing Treatise; Jane Piper Clendinning, University Representative; Diana Dumlavwalla, Committee Member; David Kalhous, Committee Member.

**SUBJECT:**Performing arts

**SUBJECT:**Music

**DEGREE:**Doctoral

**Record number: 112**

**FILENAME:**Li\_fsu\_0071N\_15013.pdf

**TITLE:**Classification of Rain Clouds Based on the Relationship between Microwave Emission and Scattering Signals

**AUTHOR:**Li, Jiangmei

**MEMBER (Professor Directing Thesis):**Liu, Guosheng, (Professor of meteorology)

**MEMBER (Committee Member):**Misra, Vasubandhu, 1970-

**MEMBER (Committee Member):**Wing, Allison A.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Earth, Ocean and Atmospheric Science

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (69 pages)

**ABSTRACT:**In this thesis, we introduce a new approach to classify rain clouds based on the relationship between the emission signal and scattering signal derived from microwave brightness temperature data. Two parameters are used as indicators of emission signal and scattering signal respectively: one is the polarization difference (D) at 19 GHz, and the other one is the polarization-corrected temperature (PCT) at high-frequencies channels. D is related to the emission of liquid hydrometeors, and PCT mainly reflects the brightness temperature depression due to the scattering by ice particles. Both D and PCT decrease with increasing precipitation rate. Therefore, certain combinations of D and PCT can be regarded as the representatives of cloud hydrometeor structures. Based on the D-PCT relationship investigated in this study, we classified the observed rain clouds into five categories—non-precipitating, light-precipitating, liquid-dominant precipitating, well-mixed precipitating, and ice-dominant precipitating clouds. We verified the results of the classification of different precipitation cases over tropical regions. For both the hurricane and front cases, the results show that the distributions of categorized cloud pixels can reflect the horizontal structure of the weather systems. The monthly gridded mean frequencies of categorized precipitating clouds are used to analyze the relationship between the seasonal and interannual cycles of tropical precipitation and clouds’ hydrometeor components. Moreover, the results indicated that in an annual cycle or an ENSO cycle, when the local precipitation frequencies increase, the occurrence frequencies of all kinds of rain clouds will increase. However, among those precipitating systems, the proportions of ice-dominant and well-mixed clouds increases while that of water-dominant clouds decrease as the local precipitation increases. Anomalies of the opposite sign tend to accompany the decreasing precipitations situations. Overall, the classification method proves to be useful to extract objective information from observed emission and scattering signals. Since clouds have always been signs of the weather systems, the long-term variances of global distribution and characteristics of rain clouds are as an aspect of cloud climatology. Moreover, the categorization of precipitation types can be useful in developing the best retrieval algorithm of rain rate for a specific cloud type. Additionally, the information about cloud types can be used to improve our understanding of cloud processes and to increase the accuracy of weather and climate models.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the Department of Earth, Ocean and Atmospheric Science in partial fulfillment of the requirements for the degree of Master of Science.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 5, 2019.

**NOTE (Keywords):**Classification, Emission, Microwave, Rain clouds, Scattering

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Guosheng Liu, Professor Directing Thesis; Vasubandhu Misra, Committee Member; Allison Wing, Committee Member.

**SUBJECT:**Atmospheric sciences

**DEGREE:**Masters

**Record number: 113**

**FILENAME:**Lightle\_fsu\_0071N\_15107.pdf

**TITLE:**The Krickets: Gender and Agency in an All-Girl Southern Folk Band

**AUTHOR:**Lightle, Caitlyn

**MEMBER (Professor Directing Thesis):**Joos, Vincent Nicolas

**MEMBER (Committee Member):**Dowell, Kristin L.

**MEMBER (Committee Member):**Mehta, Jayur M.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Anthropology

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (58 pages)

**ABSTRACT:**This thesis examines the intersection between culture-based social structure and individual agency in all-girl Southern folk band The Krickets. By utilizing practice theory we are able to understand the relationship of the individual to their inherent social rules and then compensate for individual action opposing those rules. Through the action of musical performance The Krickets express their connection to a Southern culture and act against the cultural expectations of femininity therein. In studying The Krickets we can understand how notions of femininity, Southern culture, and folk music intersect to create their individual identities, which both adhere to and subvert their cultural structures. By utilizing video ethnography as a methodology and practicing ethical feminist approaches to anthropology we can understand how The Krickets grapple with concepts of cultural identity verses personal identity.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the Department of Anthropology in partial fulfillment of the requirements for the degree of Master of Arts.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 5, 2019.

**NOTE (Keywords):**ethnographic film, ethnomusicology, female musicians, feminist anthropology, folk music, practice theory

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Vincent Joos, Professor Directing Thesis; Kristin Dowell, Committee Member; Jayur Mehta, Committee Member.

**SUBJECT:**Ethnology

**SUBJECT:**Music

**SUBJECT:**Women's studies

**DEGREE:**Masters

**Record number: 114**

**FILENAME:**Liou\_fsu\_0071E\_15071.pdf

**TITLE:**Topological Quantum Phase Transitions and Quench Dynamics

**AUTHOR:**Liou, Shiuan-Fan

**MEMBER (Professor Directing Dissertation):**Yang, Kun, 1967-

**MEMBER (University Representative):**Siegrist, Theo

**MEMBER (Committee Member):**Bonesteel, N. E.

**MEMBER (Committee Member):**Balicas, Luis

**MEMBER (Committee Member):**Engel, Lloyd W.

**MEMBER (Committee Member):**Xiong, Peng

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Physics

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (83 pages)

**ABSTRACT:**Topological phases of matter and the phase transitions between them have been the focus of much recent theoretical and experimental interest. In this thesis, we firstly study a type of topological phase transitions between quantum Hall states driven by pairing interactions through Feshbach resonances. Although quantum Hall effects were first discovered in electronic condensed matter systems, this type of phase transitions was proposed to ultra cold atom field for their ability of the control of interactions. In addition, we also investigate the quench dynamics of topological phase transitions based on specifically Haldane model and checkerboard model in the second part. In the study of topological phase transitions between fermionic integer quantum Hall (FIQH) and bosonic fractional quantum Hall (BFQH) phases, we first provide a general picture of this kind of quantum Hall phase transitions. Subsequently, we use exact diagonalization to study the quantum phases and phase transitions when a single species of fermionic atoms at Landau level filling factor $\nu\_f = 1$ in a rotating trap interact through a p-wave Feshbach resonance. We show that under weak pairing interaction, the system undergoes a second order quantum phase transition from $\nu \_{f} = 1$ fermionic integer quantum Hall (FIQH) state at positive detuning, to $\nu \_{b} = \frac{1}{4}$ bosonic fractional quantum Hall (BFQH) state at negative detuning. However, when the pairing interaction increases, a new phase between them emerges, corresponding to a fraction of fermionic atoms stay in a coherent superposition of bosonic molecule state and an unbound pair. The phase transition from FIQH phase to the new phase is of second order and that from the new phase to BFQH phase is of first order. Furthermore, we investigate the quantum phases and phase transition in a system made of two species of fermionic atoms that interact with each other via $s$-wave Feshbach resonance, and are subject to rotation or a synthetic gauge field that puts the fermions at Landau level filling factor $\nu\_f = 2$. We show that the system undergoes a continuous quantum phase transition from a $\nu\_f = 2$ fermionic integer quantum Hall state formed by atoms, to a $\nu\_b = 1/2$ bosonic fractional quantum Hall state formed by bosonic diatomic molecules. In the disk geometry we use, these two different topological phases are distinguished by their different gapless edge excitation spectra, and the quantum phase transition between them is signaled by the closing of the energy gap in the bulk. Comparisons will be made with field theoretical predictions, and the case of $p$-wave pairing. In the second part of this thesis, we study the dynamics of systems quenched through topological quantum phase transitions and investigate the behavior of the bulk and edge excitations with various quench rates. Specifically, we consider the Haldane model and checkerboard model in slow quench processes with distinct band-touching structures leading to topology changes. The generation of bulk excitations is found to obey the power-law relation Kibble-Zurek and Landau-Zener theories predict. However, an anti-Kibble-Zurek behavior is observed in the edge excitations. The mechanism of excitation generation on edge states is revealed, which explains the anti-Kibble-Zurek behavior.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Physics in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 12, 2019.

**NOTE (Keywords):**edge excitation, Feshbach resonance, Kibble-Zurek theory, quantum Hall phase transition, quench dynamics, topological phase transition

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Kun Yang, Professor Directing Dissertation; Theo Siegrist, University Representative; Nicholas E. Bonesteel, Committee Member; Luis Balicas, Committee Member; Lloyd W. Engel, Committee Member; Peng Xiong, Committee Member.

**SUBJECT:**Physics

**SUBJECT:**Condensed matter

**DEGREE:**Doctoral

**Record number: 115**

**FILENAME:**Loftus\_fsu\_0071E\_15137.pdf

**TITLE:**The Main, Mediated, and Moderated Effects of the Big Five Personality Factors on Offending

**AUTHOR:**Loftus, Zachary V.

**MEMBER (Professor Directing Dissertation):**Hay, Carter H.

**MEMBER (University Representative):**Tripodi, Stephen J.

**MEMBER (Committee Member):**Turanovic, Jillian J., 1985-

**MEMBER (Committee Member):**Bales, William D.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Criminology and Criminal Justice

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (144 pages)

**ABSTRACT:**Criminologists in the Positive tradition have long been interested in the effects of time-stable personality traits on offending. A large body of research now shows that a wide variety of traits (e.g., impulsivity, an angry disposition, callousness, and risk seeking) distinguish those who commit crimes from those who do not. Yet, very little of this work has drawn from comprehensive personality models, such as the Five-Factor Model. This is problematic because without these models, traits are studied haphazardly and with little understanding of how they come together to describe the criminal personality. Thus, the purpose of this dissertation is to advance scholarship on the personality correlates of crime by examining the relationships between the five major dimensions of personality (the Big Five) and offending. In addition to these main effects, the current study also examines mediating and moderating effects to understand how the Big Five affect offending and whether these effects are contingent on levels of criminal opportunity. To this end, data from the Pathways to Desistance Study—a longitudinal study of 1,354 youth adjudicated for serious crimes—was examined. Results from the analyses showed that (1) higher levels of Conscientiousness, Agreeableness, Emotional Stability, and Openness predicted less offending six months later, (2) these effects operated partially through moral disengagement (a measure of antisocial attitudes), and (3) the effects of Agreeableness were conditional on levels of criminal opportunity (i.e., time spent in unstructured socializing with peers and perceived neighborhood disorganization). The theoretical implications of these findings and directions for future research are discussed.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the College of Criminology and Criminal Justice in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 10, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Carter H. Hay, Professor Directing Dissertation; Stephen J. Tripodi, University Representative; Jillian J. Turanovic, Committee Member; William D. Bales, Committee Member.

**SUBJECT:**Criminology

**DEGREE:**Doctoral

**Record number: 116**

**FILENAME:**Long\_fsu\_0071N\_15025.pdf

**TITLE:**The Origin of Disfranchisement: County Level Resistance to African American Voting in Post-Emancipation Florida

**AUTHOR:**Long, Thomas W. (William)

**MEMBER (Professor Directing Thesis):**Frank, Andrew, 1970-

**MEMBER (Committee Member):**Piehler, G. Kurt

**MEMBER (Committee Member):**Grant, Jonathan A., 1963-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of History

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (119 pages)

**ABSTRACT:**This thesis examines how divisions among Florida Democrats affected the suppression of African American political participation in Florida. In post-emancipation Florida, white politicians overcame these divisions to create a framework in which the state technically met federal mandates established by the Fourteenth Amendment while also ensuring that de facto disfranchisement occurred statewide, a constitutional façade. In addition, it explores how this conversation marginalized the concerns of the state’s African American community. Four individuals epitomized the distinctive approaches to the post-Reconstruction political order. Governor David S. Walker represents Florida’s Reconstruction Era lawmakers who met in Tallahassee in 1866. Governor Walker assured legislators that Florida could return to the Union without having ratified the Fourteenth Amendment, but he later told legislators that African American suffrage was “fixed.” Unreconstructed rebels such as A.K. Allison urged violence to stop African American political participation during Reconstruction. Governor William D. Bloxham personifies Democrat officeholders who promised to suppress vigilante violence but appealed for electoral support at a Klan rally. Senator Wilkinson Call embodies the racist populism that condemned railroads and African American “lust.” Each of them contributed to Florida’s constitutional façade. Florida’s 1865 constitution denied African American suffrage. Florida’s lawmakers could not conceive of it. Governor Walker assured them it would not occur, but he accepted the reality that Congress had imposed. Allison represents a “boisterous” element of displaced aspiring white elites who violently repressed African American suffrage. Governor Bloxham represents the Democrat establishment that condemned vigilante violence as it relied on the Ku Klux Klan to maintain white electoral solidarity. Patronage and paternalism illuminate the tension that existed between the establishment embodied by Governor Bloxham, and the “boisterous” element who aspired to the establishment or sought to reclaim their position in it. Those who had the power to dispense could afford paternalism, whereas those who aspired to that power saw African American political participation as a threat to their ability to distribute patronage. Senator Call’s Confederate background, descent from Governor Richard Keith Call, and anti-railroad populism embodies Democrat divisions between the Democrat establishment conservatives who favored railroads and anti-railroad populists who complained over their land policies, charges, and damage to livestock. Shifting political coalitions of white anti-railroad populists and conservative railroad aligned Democrats defined the political as the social to exclude African Americans. His congressional tirade against African American “lust” illuminates the abiding fear that moved Florida to deny African Americans social citizenship to deny a political citizenship guaranteed by the Fourteenth Amendment. Florida’s constitutional façade held: The state had not denied African American suffrage; the Democrat Party, the only relevant political organization, simply chose not to let them participate in primary elections. Senator Call’s tirade over African American “lust” moved disfranchisement’s spirit through the door that joined the political to the social. It completed Florida’s constitutional façade that denied African Americans’ citizenship. Beginning with the constitutional convention that drafted Florida’s 1868 constitution, Democrats used gubernatorial appointments and apportionment to dilute African American political strength. During Reconstruction, a “boisterous” element, such as Allison violently suppressed African American political participation. While Governor Bloxham vowed to suppress vigilante violence, he joined Democrats in courting Klan support to turn back an electoral challenge from disaffected Democrats in Florida’s 1884 gubernatorial election. After Florida’s 1885 constitutional convention and anti-railroad legislature had marginalized African American political activity, the push to deny African American political citizenship intensified. County Democrat organizations denied African Americans the right to participate in the only relevant political organization, and the Democratic Party combined their white only rule with a populist anti-business platform. The dominance of the Democratic Party had blurred the social and the political. The exclusion of African Americans from the social organization, the Democratic Party, excluded them from the political. Their political exclusion further separated African Americans from white society. Florida had completed its constitutional façade: African Americans retained the right to vote, but their exclusion from political decision-making made that right meaningless.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the Department of History in partial fulfillment of the requirements for the degree of Master of Arts.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 29, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Andrew K. Frank, Professor Directing Thesis; G. Kurt Piehler, Committee Member; Jonathan A. Grant, Committee Member.

**SUBJECT:**United States--History

**DEGREE:**Masters

**Record number: 117**

**FILENAME:**LoPilato\_fsu\_0071N\_15043.pdf

**TITLE:**Petrolia

**AUTHOR:**LoPilato, Daniel Vincent

**MEMBER (Professor Directing Thesis):**Horack, Skip

**MEMBER (Committee Member):**Howard, Ravi

**MEMBER (Committee Member):**Jaffe, Aaron

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of English

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (133 pages)

**ABSTRACT:**In 1870, Sloop Walker leaves his home to live and work in the oil-bearing region of northwestern Pennsylvania referred to as Petrolia. After becoming involved with a local eccentric known only as the Baron, Sloop arrives in the fictional town of Earth Circuit, where a crew of seasoned rig-builders initiates him into the peculiar and transient lifestyle of the workers transforming Pennsylvania’s forests into centers of industry. But when Sloop encounters an underground network of revolutionary agents, he begins to view his labor in the forests of Petrolia as trespass against a sacred space. Inspired by history and theory alike, Petrolia examines an America haunted by its rapid expansion and conjures a landscape teetering on the edge of both radical progress and utter collapse.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Thesis submitted to the Department of English in partial fulfillment of the requirements for the degree of Master of Fine Arts.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 1, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Bruce Horack, Professor Directing Thesis; Ravi Howard, Committee Member; Aaron Jaffe, Committee Member.

**DEGREE:**Masters

**Record number: 118**

**FILENAME:**Lougheed\_fsu\_0071E\_15155.pdf

**TITLE:**A Performance Guide to Selected Jazz Arrangements of Roland Dyens

**AUTHOR:**Lougheed, Benjamin Walter Poliner

**MEMBER (Professor Directing Treatise):**Holzman, Bruce

**MEMBER (University Representative):**Clendinning, Jane Piper

**MEMBER (Committee Member):**Stillwell, Corinne

**MEMBER (Committee Member):**Sauer, Greg

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (121 pages)

**ABSTRACT:**The following is an exploration of Roland Dyens arrangements of “Nuages,” “Round Midnight,” “Over the Rainbow,” “Take the A Train,” and “A Night in Tunisia.” Chapter one will focus on Dyens’ own life and connection to other styles of music, namely jazz and Brazilian. Chapters two and three will examine each of the arrangements in turn. This analysis will include information on the harmonic and structural aspects of the pieces; historical and biographical details about relevant styles and artists, as well as Dyens’ allusions to them in his arrangements; and discussion of solutions to difficult passages and extended techniques within the arrangements all with an eye towards producing more accurate interpretations of the pieces. Finally, chapter four will put these arrangements into historical context within the larger guitar repertoire and consider the best practices for programming these pieces.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Treatise submitted to the College of Music in partial fulfillment of the requirements for the degree of Doctor of Music.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 8, 2019.

**NOTE (Keywords):**arrange, Dyens, Guitar, Jazz, Strings

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Bruce Holzman, Professor Directing Treatise; Jane Piper Clendinning, University Representative; Corinne Stillwell-Bowman, Committee Member; Greg Sauer, Committee Member.

**SUBJECT:**Music

**DEGREE:**Doctoral

**Record number: 119**

**FILENAME:**MaciasContreras\_fsu\_0071E\_14999.pdf

**TITLE:**Application of Organic Synthesis to the Development of New Imaging Tools for Fluorescence Microscopy

**AUTHOR:**Macias Contreras, Miguel Angel

**MEMBER (Professor Directing Dissertation):**Zhu, Lei, 1978-

**MEMBER (University Representative):**Piekarewicz, Jorge

**MEMBER (Committee Member):**Hanson, Kenneth G.

**MEMBER (Committee Member):**Miller, Brian G.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Chemistry and Biochemistry

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (197 pages)

**ABSTRACT:**This dissertation consists of six chapters. Chapter one gives to the reader a brief introduction to several key concepts and backgrounds such as the relevance of zinc(II) ions in biology, the definition of small molecular probes and the development of protein tags, including the SNAP-tag technology, and bioorthogonal reactions for specific labeling of targets of interest. Chapter two is focused on the synthesis of small molecular probes for selective detection of zinc(II) ions. The rationale behind their chemical structures involves (1) using a 7-dimethylaminocoumrin derivative as a fluorophore with good absorbance at 405 nm and (2) subtle modification of chemical structure to tune binding affinity. A family of three sensors was synthesized and their photophysical characterization was conducted in both organic and aqueous solutions. One of the sensors has a binding affinitity towards zinc(II) in the nanomolar range, which is relevant to certain organelles where the zinc(II) concentration is believed to be in that range. All sensors were used to image low and high concentration of zinc(II) ions in live HeLa cells. Chapter three shows how a small molecular probe was evolved into a substrate for the self-labeling enzyme SNAP-tag. The replacement of the benzyl ring in a O6-benzylguanine (BG) derivative with a pyridyl ring generated a new class of compounds, O6-(5-pyridylmethyl)guanine (5PG). 5PG derivatives were shown to be taken up by the enzyme, demonstrating its substrate ambiguity. A fluorescent 5PG derivative was employed to selectively label intracellular compartments such as nuclear envelope, actin fibers, lysosomes and Golgi apparatus. The pyridine ring was introduced with the purpose of forming part of a tetradentate ligand for zinc(II); thus, making the pyridine an integral part of a coordination motif and not only an spectator group. Such unique situation enabled the imaging of low and high concentrations of zinc at precise locations. Chapter four focusses on the development of SNAP-tag substrates for intracellular bioorthogonal labeling. A series of BG derivatives carrying reactive handles such as azides and strained alkenes was synthesized. The occurrence of strain promoted azide-alkyne cycloaddition (SPAAC) and inverse electron demand Diels-Alder (IED-DA) reaction inside cells was demonstrated using fluorescence microscopy. By introducing first a reactive handle via SNAP-tag, followed by the reaction with a suitable fluorophore, two intracellular targets –nuclear envelope and actin fibers –were specifically labeled. But the real novelty of this work is the concurrent dual labeling inside live HeLa cells. To demonstrate the feasibility of the simultaneous labeling of two protein targets the orthogonal pairs SNAP/CLIP and SPAAC/IED-DA were used. Two-color fluorescent microscopic images showed the orthogonality of the two pairs. In one experiment, the nuclear envelope was labeled with a green dye via CLIP-IED-DA and the actin fibers through SNAP-SPAAC. In a second experiment, the targets were reversed and the correct labeling was found, proving the specificity and flexibility of the method. Chapter five is divided in three sections and is intended to show the results that were not included in Chapters two, three and four but that were significant to the completion of the projects associated with those chapters. The first section is focused on the synthesis of a small molecular probe complementary to the ones described in Chapter two. After trying different synthetic strategies, such a compound could not be made. The second section describes the synthetic journey that was travelled to obtain a chelating azide containing 5PG derivative. Several strategies were followed but eventually it was shown that a bifunctional pyridine derivative carrying alcohol and acetal functionalities was the key intermediate needed to obtain the target compound. Two other BG derivatives with chelating azide functionality were also prepared. The third section focusses on the application of the azido-containing BG derivatives in the bioorthogonal labeling of live and fixed cells. The copper-catalyzed azide-alkyne cycloaddition (CuAAC) mediated labeling was not possible in living cells but it was made available in fixed cells. Fixed cells were labeled at concentrations as low 25 μM Cu(II) and with or without the use of an auxiliary ligand, showing the superiority of chelating azides versus regular azides. Chapter six concludes the work presented in the entire document.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Chemistry and Biochemistry in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 11, 2019.

**NOTE (Keywords):**bioorthogonal labeling, fluorescence microscopy, intracellular imaging, SNAP-tag, zinc(II) sensing

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Lei Zhu, Professor Directing Dissertation; Jorge Piekarewicz, University Representative; Kenneth G. Hanson, Committee Member; Brian G. Miller, Committee Member.

**SUBJECT:**Chemistry, Organic

**DEGREE:**Doctoral

**Record number: 120**

**FILENAME:**MacNamara\_fsu\_0071N\_15197.pdf

**TITLE:**Flash Characteristics and Precipitation Metrics of Western U.S. Lightning-Initiated Wildfires

**AUTHOR:**MacNamara, Brittany R.

**MEMBER (Professor Directing Thesis):**Fuelberg, Henry E.

**MEMBER (Committee Member):**Liu, Guosheng, (Professor of meteorology)

**MEMBER (Committee Member):**Bourassa, Mark Allan, 1962-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Earth, Ocean and Atmospheric Science

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (73 pages)

**ABSTRACT:**The United States Forest Service (USFS) bases their wildfire predictions on cloud-to-ground lightning flash density thresholds greater than 5 fl km-2. High flash densities and low precipitation are often emphasized with storms since they are associated with wildfire ignitions. Yet, greater flash rates tend to occur in the areas of greatest rainfall. This study focuses on 95 lightning-initiated wildfires in the western United States during the year of 2017. Lightning data provided by the National Lightning Detection Network (NLDN) were analyzed to determine which strike(s) likely caused each fire, as well as the strikes that did not. Detailed analysis of cloud-to-ground lightning characteristics and thunderstorm characteristics such as stroke density, precipitation rate, and 24-h storm-relative QPE totals are presented. Statistical analyses using a Wilcoxon-Mann Whitney rank sum test were performed to reveal differences between lightning flashes that ignite wildfires and those that do not. Results indicate multiple-stroke negative polarity cloud-to-ground flashes dominated the fire starts. In addition, wildfires were initiated in areas with low stroke densities. Based on these tentative findings, the USFS may need to revisit their methods for wildland fire prediction. Rain rates at the locations of fire starts were 8.03 mm h-1 less than those of non-fire starting flashes, while 24-h QPE totals were 5.28 mm less. These differences were found to be statistically significant. The results of this thesis will help expand the limited knowledge of operational lightning and wildfire meteorology. However, considerable additional research is needed.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the Department of Earth, Ocean and Atmospheric Science in partial fulfillment of the requirements for the degree of Master of Science.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 28, 2019.

**NOTE (Keywords):**Climate Change, Flash Density, Lightning, Precipitation, United States Forest Service, Wildfires

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Henry Fuelberg, Professor Directing Thesis; Guosheng Liu, Committee Member; Mark Bourassa, Committee Member.

**SUBJECT:**Meteorology

**SUBJECT:**Environmental sciences

**SUBJECT:**Forests and forestry

**DEGREE:**Masters

**Record number: 121**

**FILENAME:**Mafi\_fsu\_0071E\_14997.pdf

**TITLE:**Hybrid Data Mining Models for Risk and Vulnerability Analysis of Traffic Safety

**AUTHOR:**Mafi, Somayeh

**MEMBER (Professor Directing Dissertation):**AbdelRazig, Yassir

**MEMBER (University Representative):**Boot, Walter Richard

**MEMBER (Committee Member):**Ozguven, Eren Erman

**MEMBER (Committee Member):**Spainhour, Lisa

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**FAMU-FSU College of Engineering

**CORPORATE NAME:**Department of Civil and Environmental Engineering

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (203 pages)

**ABSTRACT:**As the roadway networks have been developing gradually to improve transportation accessibility to various facilities, the probability of traffic crash occurrences has also increased consequently. With an increasing transportation demand, traffic safety needs to be improved in order to reduce the economic and societal expenses related to improper traffic safety measures. The identification and prediction of crash-prone regions is an essential task in highway safety management, particularly when highway officials have a limited budget for mitigations. Generally, implementing effective methods for the prediction of high crash risk locations can facilitate research on contributing factors in traffic crashes to mitigate them, resulting in the efficient employment of federal, state and local government resources for enhancing transportation safety. In this regard, developing non-biased and accurate models capable of predicting crash risk is a vital task in transportation safety research. Another transportation issue, believed to have a close relationship with traffic safety and operation, is drivers’ gap acceptance behavior. Given the steady rise in the percentage of aging roadway users in the United States and their over-represented engagement in fatal crashes, there is a growing need for understanding how this population differs from their younger counterparts in driving performance and crash involvement. The general objective of this research is to develop hybrid data mining models for risk and vulnerability analysis of traffic safety. This research examines the feasibility of different data mining models in predicting the priority of intersections needing improvement for aging drivers by comparing their results with traditional models. It also investigates how injury severity differs between drivers of various age and gender groups by developing cost-sensitive data mining models which consider the consequences (cost) of incorrect predictions. Moreover, it examines the effect of time-based accessibility to on-premise alcohol outlets on the severity of alcohol-related crashes. This research also conducts Geographical Information System (GIS)-based hotspot analyses to identify the crash-prone locations for various occupant age groups during different time intervals of a day and predict the location of these hotspots using statistical and machine learning models. Besides, it conducts a spatiotemporal analysis to quantify the exposure of population of different age groups to crash-prone locations and to statistically analyze the decision-making process for possible improvement. This study also aims to investigate the differences in drivers’ gap acceptance behavior while performing permissive left and right turn maneuvers at four-legged intersections using the data extracted from a driving simulator. The results showed that the implemented machine learning models were superior methodologies for predicting crash risk. Moreover, the cost-sensitive learning classifiers outperformed regular classifiers at accurately predicting injuries and fatalities of crashes. Results of the crash severity models displayed substantial differences in injury severity determinants across the age/gender cohorts. Also, it was concluded that more accessibility to on-premise alcohol outlets results in more severe alcohol-related crashes. The hotspot prediction models also revealed considerable differences in crash hotspot determinants and their coefficients across the occupants’ age groups and time intervals of a day. Moreover, among the residents, the aging population were shown to be more exposed to the risk of being injured in a crash compared to other age groups. The results of driving simulation experiment also illustrated that aging drivers are more conservative in performing left turns than younger drivers, and accepted gap size, number of lanes, and the presence of pedestrians were significantly correlated with drivers’ gap acceptance behavior.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Civil and Environmental Engineering in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 13, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Yassir AbdelRazig, Professor Directing Dissertation; Walter Richard Boot, University Representative; Eren Erman Ozguven, Committee Member; Lisa Spainhour, Committee Member.

**SUBJECT:**Civil engineering

**DEGREE:**Doctoral

**Record number: 122**

**FILENAME:**MALINOWSKI\_fsu\_0071E\_15181.pdf

**TITLE:**Spawning Patterns, Trophic Ecology, and Toxicology: Conservation Related Research of an Iconic Reef Fish, the Atlantic Goliath Grouper

**AUTHOR:**Malinowski, Christopher Robert

**MEMBER (Professor Directing Dissertation):**Coleman, Felicia C.

**MEMBER (University Representative):**Huettel, Markus

**MEMBER (Committee Member):**Burgess, Scott C

**MEMBER (Committee Member):**Grubbs, R. Dean

**MEMBER (Committee Member):**Miller, Thomas E., (Professor of Biological Science)

**MEMBER (Committee Member):**Travis, Joseph, 1953-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Biological Science

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (176 pages)

**ABSTRACT:**The Atlantic Goliath Grouper, a large, long-lived reef fish in the southeastern United States, was fished to near extinction decades ago. It is now showing signs of recovery in Florida waters due to protection from fishing in state and federal waters that started in 1990. While providing some optimism for their future, recent discovery of high mercury levels in this species is cause for concern. Indeed, I contend that such levels could not only impede their full recovery but present a human health problem if the fishery were re-opened. For my dissertation, I investigated their spawning patterns and trophic ecology, the latter of which included investigations of the organisms in their diet that lead to mercury accumulation in their tissues. Mercury presents a problem because of its neurotoxic effects and its ability to bioaccumulate in some forms. My research demonstrates that mercury levels in Goliath Grouper are not only much higher than the Environmental Protection Agency’s suggested safe levels for human consumption, but that they are likely impacting the overall health and reproductive potential of this iconic species.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Biological Science in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**February 25, 2019.

**NOTE (Keywords):**diet, Goliath Grouper, health, mercury, spawning patterns, trophic ecology

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Felicia C. Coleman, Professor Directing Dissertation; Markus Huettel, University Representative; Scott C. Burgess, Committee Member; R. Dean Grubbs, Committee Member; Thomas E. (Tom) Miller, Committee Member; Joseph L. Travis, Committee Member.

**SUBJECT:**Ecology

**SUBJECT:**Toxicology

**DEGREE:**Doctoral

**Record number: 123**

**FILENAME:**Manakov\_fsu\_0071E\_14890.pdf

**TITLE:**Construction of a General Trading Approach for Financial Markets with Artificial Neural Networks

**AUTHOR:**Manakov, Andrey

**MEMBER (Professor Directing Dissertation):**Magnan, Jeronimo Francisco, 1953-

**MEMBER (University Representative):**Duke, Dennis

**MEMBER (Committee Member):**Beaumont, Paul

**MEMBER (Committee Member):**Case, Bettye Anne

**MEMBER (Committee Member):**Nolder, Craig

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Mathematics

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2018

**PHYSICAL DESCRIPTION:**1 online resource (143 pages)

**ABSTRACT:**In this work, we research several aspects of creating a general trading strategy by developing a forecasting model that uses an Artificial Neural Network (ANN) model that is based on the Convolutional Neural Network (CNN). In particular, we introduce inverted inputs and demonstrate that they reduce directional bias and reduce correlation with respect to the buy-and-hold strategy (for the underlying instrument). We empirically address issues of applying an ANN to create a trading strategy that does not use the ANN output to predict price (or its change) but provides a specific trading allocation of the underlying security for the next day of trading by using a global Sharpe-ratio-dependent cost function, instead of the often-used sum of local (or individual) squared prediction errors. The importance of the Sharpe-dependent cost function and Sharpe ratio being an appropriate measure of trading strategy is addressed and discussed. We propose a method of comparison of the trading results to random trading that employs the Sharpe-ratio distribution. We also discuss the uniqueness of the trained solution and ways to make it more independent of the initialization of the ANN's weights, either by averaging, or by the sharing of markets when pre-training the convolutional layers. The proposed method tested well in the controlled environment of artificially generated time series with different properties, extracting signal where present. It is applied to real market time series, and compared with the performance of more traditional methods, and shows promise for creating a less risky, profitable, trading strategy for a portfolio consisting of alternative investments together with the buy-and-hold of underlying securities.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Mathematics in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Fall Semester 2018.

**NOTE (Date of Defense):**November 30, 2018.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Jerry Magnan, Professor Directing Dissertation; Dennis Duke, University Representative; Paul Beaumont, Committee Member; Bettye Anne Case, Committee Member; Craig Nolder, Committee Member.

**SUBJECT:**Mathematics

**DEGREE:**Doctoral

**Record number: 124**

**FILENAME:**McCollum\_fsu\_0071E\_15057.pdf

**TITLE:**Transcribing for the Euphonium a Guide Using Selected Non-Wind Instrument Works

**AUTHOR:**McCollum, Ian T. (Ian Taylor)

**MEMBER (Professor Directing Treatise):**Benavidez, Justin

**MEMBER (University Representative):**Clary, Richard

**MEMBER (Committee Member):**Drew, John Robert, 1951-

**MEMBER (Committee Member):**Moore, Christopher, 1965-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (57 pages)

**ABSTRACT:**Transcriptions have long held significance in the solo euphonium repertoire; the first euphonium solos performed were transcriptions of trombone and cornet works from the turn of the 20th century. Despite the vast growth of this genre in the last thirty years, transcriptions have maintained their significance and continue to be a staple part of university studio curricula and solo recital programs. However, these curricula and programs utilize few transcribed works compared to the body of original compositions from which standard transcriptions are derived, largely the Baroque and Classical periods. There also exists no written guide to assist euphoniumists in crafting their own transcriptions. The value of transcriptions is in challenging the euphoniumist in the technical skills required by the music and exposing euphoniumists to new pieces of repertoire. The process of transcribing requires the transcriber to learn the notation of the music, performance practices of the time in which the music was written, and the composer’s biography and its influence on their compositions. The student will also educate themselves on the instruments utilized in the compositions and how these instruments differ from their modern versions, and materials and commentary from performers and pedagogues to which euphoniumists are rarely exposed. As such, the true value of a euphoniumist crafting their own transcription is in providing opportunities to improve their performing abilities, and in crafting a more consummate musician. When transcribing works from one instrument or voice to another, the transcriber must accept that the work will not be entirely the same in the transcription as it was previously in the original composition. In some works, like Beethoven’s Cello Sonata No. 1, Op. 5 No.1, the solo cello material is characteristic of idiomatic writing of the euphonium and few alterations will need to be made. However, most works, including the first movement of Franz Schubert’s Piano Sonata No. 21 in B-flat Major, D. 960, and Johann Sebastian Bach’s Partita for Violin in B Minor, No.1, BWV 1002, numerous alterations will need to be made in order to make the works achievable to a euphoniumist of moderately advanced ability. There are a great number of works for which a transcription for the euphonium is not feasible. Some works are so uniquely and characteristically composed for the original instrument that a transcription for the euphonium would be absurd. It is the responsibility of the transcriber to select works suitable to transcribing for the euphonium and to keep the works’ musical integrity as intact as possible. This means that the transcriber should only make changes to the original work when necessary, and the changes made should be as imperceptible as possible. The body of this treatise was derived from books, periodicals, theses, analysis and study of the musical scores, and the personal experiences of the author in applying transcriptive techniques in practice and performances. This treatise focuses on techniques and principles utilized in adapting non-wind instrumental works into transcriptions performable by a solo euphoniumist of moderately advanced ability. In the first chapter, Ludwig van Beethoven’s Cello Sonata No.1, Op. 5, No. 1 will be utilized to describe techniques required to transcribe cello solos with piano accompaniment. The focus of the second chapter will be transcribing an unaccompanied euphonium solo from unaccompanied stringed instrument repertoire using Johann Sebastian Bach’s Partita for Violin, No.1, BWV 1002. Finally, the third chapter will focus on transcribing a solo piano work into a solo euphonium with piano accompaniment format using Franz Schubert’s Piano Sonata No. 21 in B-flat Major, D. 960. The octave designation system used in this treatise is that of the International Standards Organization. In this system, middle C is notated as C4, an octave higher than middle C is C5, and an octave lower than middle C is C3. Each octave begins with C and ends with B such that the B below C4 is B3.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Treatise submitted to the College of Music in partial fulfillment of the requirements for the degree of Doctor of Music.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 8, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Justin Benavidez, Professor Directing Treatise; Richard Clary, University Representative; John Drew, Committee Member; Christopher Moore, Committee Member.

**SUBJECT:**Music

**SUBJECT:**Performing arts

**DEGREE:**Doctoral

**Record number: 125**

**FILENAME:**McCray\_fsu\_0071N\_15200.pdf

**TITLE:**Investigating Oligomerization as a Form of Enzyme Regulation in Human Glucokinase

**AUTHOR:**McCray, Malcolm M. R. K. (Malcolm Marvin Rufus Kenyatta)

**MEMBER (Professor Directing Thesis):**Miller, Brian G.

**MEMBER (Committee Member):**Zhu, Lei, 1978-

**MEMBER (Committee Member):**Roper, Michael Gabriel

**MEMBER (Committee Member):**Stagg, Scott

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Chemistry and Biochemistry

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (47 pages)

**ABSTRACT:**Recent studies have shown the importance of enzyme regulation through the formation of higher order structures. This is exemplified by Acetyl coenzyme A Carboxylase, and Cytidine Triphosphate synthase, two enzymes that form long chain filaments in the presence of specific activators [5-7,14,22,26]. Recently, yeast glucokinase (Glk1p) was found to form filaments in the presence of increasing concentrations of Glucose-6-phosphate (G6P), the product of the reaction that it catalyzes [18]. Due to this fact, and the consistent appearance of what seem to be higher order and oligomer like peaks in size exclusion chromatography (SEC) chromatograms of human glucokinase (GK) expressed from Escherichia coli, an investigation of the nature of these peaks was conducted. Through the use of SEC, a method described in Tayyab at al 1992 was used to determine the molecular weight [38]. This resulted in the discovery that only the oligomeric peak was formed over time, was the approximate size of a trimeric glucokinase structure. SEC also discovered that factors, including time and ligand presence, affected the formation of the oligomeric complex, while spectrophotometric assays of the oligomeric protein indicated a decrease in overall activity. The oligomeric form of GK produced little to no activity in the presence of increasing concentrations of its substrate, glucose. This finding is consistent with the fact that the oligomer is an inactive form of GK that is not affected by glucose concentrations.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the Department of Chemistry and Biochemistry in partial fulfillment of the requirements for the degree of Master of Science.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 19, 2019.

**NOTE (Keywords):**glucokinase, structure

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Brian G. Miller, Professor Directing Thesis; Lei Zhu, Committee Member; Michael Roper, Committee Member; Scott Stagg, Committee Member.

**SUBJECT:**Biochemistry

**DEGREE:**Masters

**Record number: 126**

**FILENAME:**McDermott\_fsu\_0071N\_15050.pdf

**TITLE:**Disengagement Training for the Treatment of Pathological Worry: A Preliminary Test

**AUTHOR:**McDermott, Katherine A.

**MEMBER (Professor Directing Thesis):**Cougle, Jesse R. (Jesse Ray), 1975-

**MEMBER (Committee Member):**Schmidt, Norman B.

**MEMBER (Committee Member):**Ganley, Colleen M.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Psychology

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (46 pages)

**ABSTRACT:**Pathological worry is characterized by an inability to distract or disengage from worry, and this uncontrollability is the defining feature of Generalized Anxiety Disorder (GAD; Ruscio & Borkovec, 2004). Several interventions, including stimulus control (McGowan & Behar, 2013) and thought replacement (Eagleson, Hayes, Mathews, Perman, & Hirsch, 2016), have attempted to target disengagement from worry by restricting worry as soon as it begins. However, these interventions have not targeted disengagement from worry once participants have fully engaged with it, nor do they involve cultivating alternative topics to compete with worry. The present study assessed a novel computerized treatment designed to train disengagement from worry. Participants with pathological worry (N = 50) were randomized to three sessions of Worry Disengagement Training (WDT) or a waitlist control. Across six sessions, participants in the WDT condition alternated between writing about their worry and positive writing. WDT led to increased ability to disengage from in vivo worry on a breath focus task, resulting in both fewer negative intrusions (B = -.29, p = .02; sr2 = .08) and lower self-reported worry (B = -.49, p < .001, sr2 = .25) during the task. Relative to waitlist, WDT also led to lower self-reported worry (PSWQ; B = -.36, p = .001, sr2 = .14) and depressive symptoms (B = -.25, p = .02, sr2 = .07). These effects remained in the subset of participants meeting criteria for GAD. WDT did not appear to impact more behavioral symptoms of GAD or anxious arousal. In summary, WDT may be effective in increasing disengagement ability and reducing worry and depression among those with pathological worry. Future research directions are discussed.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Thesis submitted to the Department of Psychology in partial fulfillment of the requirements for the degree of Master of Science.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 11, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Jesse R. Cougle, Professor Directing Thesis; N. Brad Schmidt, Committee Member; Colleen M. Ganley, Committee Member.

**SUBJECT:**Clinical psychology

**DEGREE:**Masters

**Record number: 127**

**FILENAME:**Meng\_fsu\_0071N\_15230.pdf

**TITLE:**Using Frequency Tagging to Study the Effect of Category Learning on Visual Attention to Object Parts

**AUTHOR:**Meng, Yue

**MEMBER (Professor Directing Thesis):**Folstein, Jonathan R.

**MEMBER (Committee Member):**Boot, Walter Richard

**MEMBER (Committee Member):**Proudfit, Greg Hajcak

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Psychology

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (67 pages)

**ABSTRACT:**Subordinate-level category learning is known to cause changes in attentional modulation for learned stimuli outside of the category learning task. In our current study we investigated how visual attention changes after training on categorization. In Experiment 1, participants were trained over six sessions to categorize a set of space plant stimuli based on three out of six features. In the following Steady-state EEG session, categorization-relevant features and categorization-irrelevant features were frequency-tagged. On each trial, participants were cued to monitor either relevant features or irrelevant features of a space plant from the trained stimulus set to detect the onset of a small red dot, they performed the same task on another set of untrained stimuli as well. We found an attentional effect on all attended features regardless of their relevancy to categorization or training status. In Experiment 2 we tested whether it was simply easy to attend to the cued features even without training and additionally tested whether object-based attention mechanisms affected the effect of attention on the steady state EEG. Participants performed the same target detection task on the same two sets of stimuli, and two additional sets of stimuli were created by modifying the original sets so that the exemplars were composed of individual parts instead of being whole objects. In untrained participants, there was no significant difference between steady state frequencies of attended and unattended features in any condition, suggesting that effects of training might have generalized to untrained stimuli in Experiment 1. Combining results from both Experiment 1 and 2, the attentional effect in Experiment 1 could come from a flexible spatial attention template or enhanced push-pull mechanisms of spatial attention.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Thesis submitted to the Department of Psychology in partial fulfillment of the requirements for the degree of Master of Science.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 1, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Jonathan R. Folstein, Professor Directing Thesis; Walter Richard Boot, Committee Member; Greg Hajcak, Committee Member.

**SUBJECT:**Psychology

**DEGREE:**Masters

**Record number: 128**

**FILENAME:**Merisier\_fsu\_0071N\_15239.pdf

**TITLE:**Modern Patriotism

**AUTHOR:**Merisier, Laurah Vanessa

**MEMBER (Professor Directing Thesis):**VanWeelden, Kimberly D.

**MEMBER (Committee Member):**Bugaj, Kasia

**MEMBER (Committee Member):**Fredrickson, William E.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (99 pages)

**ABSTRACT:**This paper outlines the history of songs within the American patriotic song canon and their role within society and music education curricula in the public school systems of the past and present. A thorough examination of the functions of the text of patriotic songs includes praising American leaders and heroes, glorifying political ideologies and natural resources, reflecting cultural attitudes and concerns during specific eras and crises, describing military life and aspirations, communicating loyalties, invoking religious imagery, and general rejoicing. Included is an analysis of each patriotic song, including The Star-Spangled Banner, and an examination of its tune, text, and performance practice of the specific circumstances of the time, culture, and environment in which it arose. The purpose of this study was to investigate the role of patriotic songs within the context of the United States of America’s history. Through examining the historical contexts of patriotic songs in the United States, this paper seeks to answer the following questions: 1. What role does music education curricula play in shaping American patriotism? 2. In what contexts and for what reasons have American patriotic songs been composed? 3. Is the Star-Spangled Banner the best song to represent an increasingly diverse United States of America? Keywords: PATRIOTIC SONGS, NATIONAL ANTHEM, THE STAR-SPANGLED BANNER, MUSIC EDUCATION

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the College of Music in partial fulfillment of the requirements for the degree of Master of Music Education.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 19, 2019.

**NOTE (Keywords):**music education, national anthem, Patriotic songs, The Star-Spangled Banner

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Kimberly VanWeelden, Professor Directing Thesis; Katarzyna Bugaj, Committee Member; William Fredrickson, Committee Member.

**SUBJECT:**Music--Instruction and study

**DEGREE:**Masters

**Record number: 129**

**FILENAME:**Mills\_fsu\_0071E\_15138.pdf

**TITLE:**Towards Automating the Establishment and Evolution of Software Traceability

**AUTHOR:**Mills, Chris (Christopher)

**MEMBER (Professor Directing Dissertation):**Haiduc, Sonia

**MEMBER (University Representative):**Blessing, Susan K., 1961-

**MEMBER (Committee Member):**Chakraborty, Shayok

**MEMBER (Committee Member):**Zhao, Peixiang

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Computer Science

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (144 pages)

**ABSTRACT:**Software systems contain an immense amount of information captured in a variety of documents such as source code files, user documentation, use and test cases, bug reports, and system requirements among others. Relationships between these pieces of information -- called traceability links -- provide stakeholders broader knowledge about a system's constituent pieces and support many aspects of the software's development, maintenance, and evolution. Ideally, traceability links would be documented as software artifacts are produced. For instance, as they work, developers would document which test cases exercise which code segments or which code classes implement which use cases. However, this is typically not the case. Due to organizational issues such as tight timelines for product delivery and lack of buy-in by project managers, software traceability is often a secondary concern. To address this situation and improve traceability for a system post hoc, stakeholders can perform Traceability Link Recovery (TLR). TLR is a software engineering task that fills in missing traceability information by establishing (i.e., recovering) links between related artifacts. Through this process, software traceability can be promoted to naturally support various tasks such as program comprehension, concept localization, verifying test coverage, and ensuring that system and legal requirements are met. Unfortunately, performing TLR manually is an extremely time and resource intensive task. Therefore, even though prior work suggests it directly improves software maintenance and evolution, few systems have sufficient traceability to realize these benefits. The few that do are mainly safety-critical and have tight regulatory requirements where traceability is legally required for quality assurance to mitigate risk. First, we seek to reduce the cost of establishing traceability links through TLR by improving automatic approaches to it based on artifact similarity. Second, we seek to reduce the cost of maintaining existing traceability information by applying supervised machine learning. This technique mines statistical patterns from historical traceability information to build a predictive model that infers artifact relationships without the need for a human operator. As a result, software teams are able to realize the hitherto cost prohibitive benefits of traceability even for projects where there is no legal requirement for traceability to exist.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Computer Science in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 18, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Sonia Haiduc, Professor Directing Dissertation; Susan Blessing, University Representative; Shayok Chakraborty, Committee Member; Peixiang Zhao, Committee Member.

**SUBJECT:**Computer science

**DEGREE:**Doctoral

**Record number: 130**

**FILENAME:**Moriyama\_fsu\_0071E\_15002.pdf

**TITLE:**Empire of Direct Mail: Media, Fundraising, and Conservative Political Consultants

**AUTHOR:**Moriyama, Takahito

**MEMBER (Professor Directing Dissertation):**Piehler, G. Kurt

**MEMBER (University Representative):**Gomez, Brad T., 1970-

**MEMBER (Committee Member):**Koslow, Jennifer Lisa, 1970-

**MEMBER (Committee Member):**Sinke, Suzanne M.

**MEMBER (Committee Member):**Creswell, Michael, 1958-

**MEMBER (Committee Member):**McVicar, Michael J.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of History

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (303 pages)

**ABSTRACT:**This study examines the rise of modern American conservatism by analyzing the role of computerized direct mail in the conservative movement from the 1950s to the 1980s. In the post-World War II years, the advertising industry on Madison Avenue developed direct marketing to reach out to prospective customers. As political consultants in New York City introduced the new advertising strategy into politics during the 1950s, direct mail became an important medium especially for conservatives when the majority of mass media was liberal. Empire of Direct Mail focuses on conservative activists in New York and Washington, D.C., such as Marvin Liebman and Richard Viguerie, narrating how direct mail contributed to right-wing organizations and politicians. Constructing the computer database of personal information, direct mail operatives compiled mailing lists of supporters, which provided conservative candidates, including Barry Goldwater, George Wallace, and Ronald Reagan, with nationwide networks of voters and contributors. Right-wing messengers effectively employed direct mail by using emotion as a campaign strategy. They capitalized on rage and discontent in post-1960s America in order to court Southern Democrats, middle-class white suburbanites, and blue-collar workers. While liberal critics condemned conservatives for their emotionalism, liberals unintentionally promoted direct mail politics. The Federal Election Campaign Act Amendments of 1974 brought about the ascendancy of conservative direct mail as the liberal campaign finance reform prohibited big contribution. Direct mail had profound impacts not only on the conservative movement but also on American politics, creating a grassroots activism as the mass of small contribution rather than the accumulation of local engagement. Thus, this research demonstrates how direct mail played a role in transforming the contours of American politics and how it affected American political participation in the twentieth century.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of History in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 8, 2019.

**NOTE (Keywords):**advertising, conservatism, direct mail, media, social movement, U.S. politics

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Guenter Kurt Piehler, Professor Directing Dissertation; Brad T. Gomez, University Representative; Jennifer L. Koslow, Committee Member; Suzanne M. Sinke, Committee Member; Michael Creswell, Committee Member; Michael McVicar, Committee Member.

**SUBJECT:**History

**DEGREE:**Doctoral

**Record number: 131**

**FILENAME:**Murji\_fsu\_0071E\_15099.pdf

**TITLE:**Developing Strategy: An Examination of Strategic Planning Processes of Divisions of Student Affairs in Canadian Higher Education Institutions

**AUTHOR:**Murji, Shermin

**MEMBER (Professor Directing Dissertation):**Jones, Tamara Bertrand

**MEMBER (University Representative):**Lamont, Bruce T.

**MEMBER (Committee Member):**Guthrie, Kathy L.

**MEMBER (Committee Member):**Schwartz, Robert A.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Education

**CORPORATE NAME:**Department of Educational Leadership and Policy Studies

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (259 pages)

**ABSTRACT:**The current Canadian higher education environment is one in which there is competition for limited resources, learning must be measured and demonstrated, and student demographics are evolving and changing on a continual basis. The field of Student Affairs in higher education, which traditionally provides support services to students and is often referred to as co-curricular education, is a necessary and valuable Division in colleges and universities (Witt, 2005). The Division contributes to the cultural context and identity of the institution as well as to the success of its students. It is integral Student Affairs Departments and Divisions have a clear purpose, vision, and mission, to ensure continued success and longevity. Strategic planning is a central process to this development and implementation. Strategic planning, adopted from the corporate industry, is prevalent in higher education institutions around the world (Bryson, 2011). Examining how Divisions of Student Affairs (DSAs) engage with strategic planning, however, has not been studied, especially in Canada. With its unique purpose, role, and structure, Student Affairs Divisions need to adopt a strategic planning process that works for them, but much more research must be conducted before we arrive at this goal. To respond to this need, this study examined existing strategic planning processes used by Divisions of Student Affairs in Canada. Tromp and Ruben (2010) created the Strategic Planning in Higher Education Framework (SPHEF) for use specifically in college and university contexts. This model was used to guide the study, and data were compared to this model to determine its relevance and appropriateness in Student Affairs settings in Canada. The data were collected using a mixed methods approach involving a survey followed by interviews. The survey was distributed to all Senior Student Affairs Officers (SSAOs) in Canadian colleges and universities, with support from the Canadian Association of College and University Student Services (CACUSS). After garnering 37 survey responses, a 19.1% response rate, five interviews were conducted with specifically selected individuals based on their survey data. The key findings indicate that SSAOs and DSAs are engaging in planning efforts, with most pursuing strategic planning. The importance of institutional alignment, engaging Student Affairs leadership and staff in the strategic planning process, and the extensive use of data are some themes that were recurring. Some common challenges or barriers to success were managing capacity and resources, varying terminology, and some resistance or hesitancy by staff to engage in planning. The majority of participants indicated they will continue with the same planning approach in the future, but there was enthusiasm and eagerness to create a community of SSAOs to discuss strategic planning and share experiences and lessons learned. Additionally, it was found that the SPHEF is not an appropriate tool to be used by SSAOs in Canadian Student Affairs contexts. Several recommendations for additional research and potential changes to practice are presented, which include a suggestion to determine if a single strategic planning process or model is even required. The data indicate that it is necessary to study the Canadian context as unique, and different, compared to other international settings, such as the United States of America. While this study begins to fill the large gap in literature and research in the area of strategic planning in Student Affairs, especially in Canada, additional investigation is required to validate these findings and build upon the valuable conclusions generated from the data.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Educational Leadership and Policy Studies in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 11, 2019.

**NOTE (Keywords):**Canada, Canadian higher education, post-secondary education, strategic planning, Student Affairs, Student Services

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Tamara Bertrand Jones, Professor Directing Dissertation; Bruce Lamont, University Representative; Kathy L. Guthrie, Committee Member; Robert A. Schwartz, Committee Member.

**SUBJECT:**Education, Higher

**DEGREE:**Doctoral

**Record number: 132**

**FILENAME:**Neary\_fsu\_0071E\_15084.pdf

**TITLE:**Ring Opening Metathesis Polymerization of Low Ring Strain Species

**AUTHOR:**Neary, William James

**MEMBER (Professor Directing Dissertation):**Kennemur, Justin Glenn

**MEMBER (University Representative):**Alamo, Rufina G.

**MEMBER (Committee Member):**Alabugin, Igor V., (Professor)

**MEMBER (Committee Member):**Smith, Joel M.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Chemistry and Biochemistry

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (203 pages)

**ABSTRACT:**The ring opening metathesis polymerization of cyclopentene has been historically challenging due to the low ring strain nature of the cyclic olefin. Due to these challenges, the ROMP of this unique monomer has been overlooked for many years. We aim to shine light on this material and hopefully highlight its synthetic utility in areas that lack synthetic diversity in this thesis. We began our adventure on the ROMP of cyclopentenes with the investigation of 4-phenylcyclopentene. The polymers produced from this monomer upon hydrogenation produced a precision ethylene-styrene copolymer with a phenyl on every 5th carbon backbone equating to a material with 71.2% styrene (w/w). Not only was this an area where single-site catalyst struggled, but this was the first time these polymers were produced in a precise manner. These materials lead our group to many other investigations such as investigations on its mechanical properties, post-polymerization modifications, and also a handful of collaborations. While this material brought a new interest of precision based materials to the Kennemur lab and laid one of the core foundations of our labs, it did leave some things to be desired, notably, the control of this polymerization process. Our emerging interest in this polymer quickly led us to find that controlling the polymerizations of cyclopentene based monomers using ruthenium based catalyst were problematic. With no system in place to control polymerizations, our group came up with a new methodology that utilizes cyclopentenes low ring strain and common thermodynamic principles to control the polymerizations. In this new methodology, termed variable temperature-ROMP, the simple variation of reaction temperature allowed for total control over the polymerization process for the first time. With this new methodology in hand, we aimed to synthesize complex architectures in which the newly formed precision materials were needed. The first structures we targeted were bottlebrush polymers. The successful polymerizations produced precision grafted polymers with grafts on every fifth backbone carbon, similar to the most common bottlebrush structures, poly(norbornene)s. This account was our first success in the realm of precision complex architectures, and hopefully many more architectures using these materials and the definitive correlation of structure to material properties will ensue. Out of all of experiments a graduate student imagines when joining a polymer lab, depolymerizing ones precious polymer back into starting material is the last thing they imagine. However, the unique topology of polypentenamers made this imagination a reality. Realizing that bottlebrush polymers produced from polypentenamers depolymerize in a unzipping mechanism unlocked a lot of possibilities for the future of this lab. This thesis will discuss in detail all of the success of polypentenamers in the Kennemur lab over the years and current work aimed to better understand these materials.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Chemistry and Biochemistry in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 13, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Justin G. Kennemur, Professor Directing Dissertation; Rufina A. Alamo, University Representative; Igor A. Alabugin, Committee Member; Joel M. Smith, Committee Member.

**SUBJECT:**Chemistry

**DEGREE:**Doctoral

**Record number: 133**

**FILENAME:**Newell\_fsu\_0071E\_15058.pdf

**TITLE:**Capital Flow Dynamics: Theory and Evidence

**AUTHOR:**Newell, Graham David

**MEMBER (Professor Directing Dissertation):**Atolia, Manoj

**MEMBER (University Representative):**Kercheval, Alec N.

**MEMBER (Committee Member):**Dmitriev, Mikhail I.

**MEMBER (Committee Member):**Kreamer, Jonathan

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Social Sciences and Public Policy

**CORPORATE NAME:**Department of Economics

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (109 pages)

**ABSTRACT:**My dissertation investigates the dynamics of international capital flows, distinguishing between net and gross flows. Chapter One considers both net and gross capital flows. I develop a small open economy model which endogenous sudden stops in net capital inflows. I then show how a second electronic currency can be used as a policy tool to reduce the volatility of capital flows. I also examine the empirical regularities of gross capital flows for the G7 countries and the implications for gross flows from a data set of investment decisions from a selection of large U.S. public pension funds. I document three important patterns in the aggregate data. First, gross capital flows are highly volatile. Second, there is a strong positive relationship between capital inflows and outflows. Third, gross capital flows are acyclical when accounting for the global financial cycle; global factors, rather than the domestic business cycle, account for a significantly greater proportion of the variation in gross flows. From firm-level pension fund data, I find that international investment decisions are large enough to contribute to gross flow volatility. For periphery economies which are the recipient of these firms' equity investments, participation in those economies is variable with firms entering, exiting, and changing the mix of markets in which they invest. The cost structure of foreign investing suggests that fixed participation costs are statistically significant and quantitatively important. The stylized facts I document are at odds with the economic theory regarding capital flows, therefore, in Chapter Two, I develop a large open-economy portfolio choice model and solve it globally with a novel solution algorithm. Using this model I show that fixed participation costs for investing abroad of less than ten basis points is sufficient to reproduce both the observed volatility of gross capital flows and the correlation between inflows and outflows.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Economics in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 5, 2019.

**NOTE (Keywords):**Dynamic Stochastic General Equilibrium, Gross Capital Flows, Portfolio Choice

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Manoj Atolia, Professor Directing Dissertation; Alec Kercheval, University Representative; Mikhail Dmitriev, Committee Member; Jonathan Kreamer, Committee Member.

**SUBJECT:**Economics

**SUBJECT:**Economics

**DEGREE:**Doctoral

**Record number: 134**

**FILENAME:**Ogle\_fsu\_0071E\_15139.pdf

**TITLE:**The Role of Race and Ethnicity in Determining Solitary Confinement Placements in Juvenile Detention Facilities

**AUTHOR:**Ogle, Meghan Rose

**MEMBER (Professor Directing Dissertation):**Turanovic, Jillian J., 1985-

**MEMBER (University Representative):**Tripodi, Stephen J.

**MEMBER (Committee Member):**Mears, Daniel P., 1966-

**MEMBER (Committee Member):**Hay, Carter H.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Criminology and Criminal Justice

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (176 pages)

**ABSTRACT:**This dissertation examines whether there are racial and ethnic disparities in the use of solitary confinement among pre-adjudicatory youth in juvenile detention centers throughout the state of Florida. In doing so it adds to the existing scholarship in the field of juvenile justice in addition to providing more information about the roles that race and ethnicity play in discretionary decisions throughout the American justice system. To this end, the presence of racial and ethnic disparities (i.e., whether racial and ethnic minority youth are significantly more likely than white youth to experience a given outcome) was assessed with respect to five outcomes: 1) the decision to place a youth in solitary confinement, 2) the number of times a youth was placed in confinement during a single juvenile detention stay, 3) placement in confinement that lasts 24 hours or longer, 4) placement in confinement within one day of admission to detention, and 5) placement in confinement within one week of admission to juvenile detention. Findings revealed evidence of racial disparity in only the first of these outcomes and no evidence of ethnic disparity across any of the five outcomes. Specifically, black youth had 68.8% greater odds of being placed in solitary confinement than white youth even after controlling for relevant predictive factors such as risk to reoffend. Overall, this suggests that, contrary to the equal treatment guaranteed by the American criminal justice system, race plays a significant role in the discretionary decision to place a youth in solitary confinement. Suggestions for alleviating such disparate treatment on the basis of race as well as implications for theory and directions for future research are discussed.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the College of Criminology and Criminal Justice in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 17, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Jillian Turanovic, Professor Directing Dissertation; Stephen Tripodi, University Representative; Daniel P. Mears, Committee Member; Carter Hay, Committee Member.

**SUBJECT:**Criminology

**DEGREE:**Doctoral

**Record number: 135**

**FILENAME:**Omidvar\_fsu\_0071N\_15273.pdf

**TITLE:**Detecting Wormlike Micellar Microstructure Using Extensional Rheology

**AUTHOR:**Omidvar, Rose

**MEMBER (Professor Directing Thesis):**Mohammadigoushki, Hadi

**MEMBER (Committee Member):**Ramakrishnan, Subramanian

**MEMBER (Committee Member):**Hallinan, Daniel T., Jr.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**FAMU-FSU College of Engineering

**CORPORATE NAME:**Department of Chemical and Biomedical Engineering

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (66 pages)

**ABSTRACT:**Viscoelastic wormlike micelles are widely used in variety of industrial processes, and daily life applications such as food, paint, pharmacy, oil-field operations and others. Wormlike micelles usually contain surfactant and salts that are dissolved in water at high concentrations. These systems share many similarities with viscoelastic polymer solutions and follow similar scaling laws. However, unlike polymers, micellar chains have the ability to break and reform and for this reason they are also known as living polymers. Many of the above industrial applications, involve continuous shearing and extensional flows of wormlike micelles. Therefore, a fundamental understanding of micellar dynamics in shear and extensional flows is necessary for optimal design of such processes. Dynamics of viscoelastic wormlike micelles have been extensively studied under shear deformations. However much less is known about the behavior of these systems in predominantly extensional flows. Therefore, a fundamental understanding of micellar dynamics and morphological transitions in extensional flows is needed. In this project, we studied the nonlinear dynamics of a model wormlike micellar solutions using capillary breakup extensional rheometer (CaBER), shear rheology and Transmission Electron Microscopy (TEM). Wormlike micellar solutions contain cetyltrimethylammonium tosylate (CTAT) in deionized water over a wide range of surfactant concentrations. Steady shear experiments indicate that the shear relaxation time and the zero-shear rate viscosity increase as a function of surfactant concentration up to a critical threshold, beyond which shear relaxation time drops to smaller values, but zero shear viscosity approaches an asymptotic value. TEM images indicate that as surfactant concentration increases, the micellar length increases and beyond the critical concentration micelles become entangled and shorter in size. Our results indicate that at low surfactant concentrations, where micellar solutions exhibit shear thickening, extensional flows lead to extreme elongational thickening possibly due to elongation induced structure (EIS) formation. Within this range of concentration, the extensional relaxation time is fairly constant and as the surfactant concentration increases, the extensional relaxation time increases. More importantly, we have estimated the dimensionless Trouton ratio in extensional flows over a wide range of surfactant concentrations. Trouton ratio is defined as the ratio of transient extensional viscosity over the zero-shear viscosity of the fluid. Our results show that Trouton ratio increases as a function of time in the course of filament thinning dynamics until it asymptotes to a constant value. It turns out that the maximum Trouton ratio decreases as surfactant concentration increases and finally reaches a constant value around Tr ≈ 3 for concentration above the critical concentration. This clearly shows that uniaxial extensional flows and in particular, CaBER is sensitivity to microstructural changes in wormlike micelles.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the Department of Chemical and Biomedical Engineering in partial fulfillment of the requirements for the degree of Master of Science.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 8, 2019.

**NOTE (Keywords):**CaBER, Extensional Rheology, Rheology, Wormlike micelles

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Hadi Mohammadigoushki, Professor Directing Thesis; Subramanin Ramakrishnan, Committee Member; Daniel Hallinan, Committee Member.

**SUBJECT:**Chemical engineering

**DEGREE:**Masters

**Record number: 136**

**FILENAME:**Orr\_fsu\_0071E\_15040.pdf

**TITLE:**"Come, Ask My Heart": Voice, Meaning, and Affect among Algerian Sha'Bi Musicians in Paris

**AUTHOR:**Orr, Christopher C. (Christopher Crandall)

**MEMBER (Professor Directing Dissertation):**Jackson, Margaret R.

**MEMBER (University Representative):**Gaiser, Adam R., 1971-

**MEMBER (Committee Member):**Gunderson, Frank D.

**MEMBER (Committee Member):**Bakan, Michael B.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (204 pages)

**ABSTRACT:**In this dissertation I explore performances of Algerian sha‘bī music in Paris as affectively powerful experiences for the Algerian migrant community. Literally meaning “popular,” sha‘bī developed as a modernized form of colloquial sung poetry among the working class of mid-twentieth century Algiers and has remained a significant mode of cultural expression in the twenty-first century. By comparing a range of formal and informal contexts of performance, I consider the interdependency of place and intimacy in the expression of authority, morality, ecstasy, tradition, and communal belonging in sha‘bī praxis. I eschew dyadic constructions of home and exile and instead explore the idea of place in multiple guises, both real and imagined, as it either constrains or enables shared ecstatic experience among listeners. During successful sha‘bī performances, participants transform physical spaces into places of intimacy by entraining with one another’s emotional states. This state of shared heightened emotion is vested in the role of the shaykh, who moves the audience through skillful execution of sha‘bī’s musical conventions and his demonstration of textual knowledge through a convincing interpretation of the musical poetry. Central to this experience is the voice of the shaykh, which imbues the text with affective power and establishes the singer as the embodiment of tradition. As evoked metaphorically in the sung refrain of a well-known song, “Come, ask my heart to share with you its news and you’ll see that you own it and you know what you’ve done to it,” the singer invites the audience into a shared ritual of ecstatic, musical interaction in which bodily co-presence and emotional entrainment bring listeners together in collective effervescence. Perhaps most importantly, singers are imbued with moral virtues by adoring devotees, which allows them to shape the emotional experiences of individual performances. Informed by interviews and participant observations, I examine how the sha‘bī singer comes to embody the weight of tradition and joins with musicians and audiences to facilitate intimacy across a range of Parisian environments. In the process, I seek to illuminate why sha‘bī continues to be such a dynamic, meaningful mode of cultural expression for France’s Algerian diasporic community.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the College of Music in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 29, 2019.

**NOTE (Keywords):**Algeria, Diaspora, France, Ritual, Sha‘bī, Voice

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Margaret Jackson, Professor Directing Dissertation; Adam Gaiser, University Representative; Frank Gunderson, Committee Member; Michael B. Bakan, Committee Member.

**SUBJECT:**Ethnology

**SUBJECT:**Africa, North--Study and teaching

**DEGREE:**Doctoral

**Record number: 137**

**FILENAME:**Osborne\_fsu\_0071N\_15021.pdf

**TITLE:**Agreement between Parent and Teacher Ratings of Problem Behaviors: The Role of Children's Executive Function

**AUTHOR:**Osborne, Colleen M.

**MEMBER (Professor Directing Thesis):**Lonigan, Christopher J.

**MEMBER (Committee Member):**Kofler, Michael J.

**MEMBER (Committee Member):**Schatschneider, Christopher

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Psychology

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (68 pages)

**ABSTRACT:**Discrepancies between parent and teacher ratings of problem behaviors have been reported consistently throughout the literature. This study is built on the Attribution Bias Context Model, which suggests that the differences in the ratings of behavior may reflect different observable behaviors across contexts rather than different interpretations of the behavior by the informants. The purpose of this study was to examine the degree to which discrepancies in parents’ and teachers’ ratings of behaviors of young children were associated with children’s executive function (EF). Using a sample of 125 children attending first and second grade in North Florida, EF was directly assessed using a battery of EF measures that was developed for use with this age group, and both parents and teachers completed the Strengths and Weakness of ADHD-related and Normal Behavior (SWAN) questionnaire and Connors Teacher Rating Scale-15 (CTRS) to assess problem behaviors. Quantile regression was used to assess the changes in the relation of the discrepancy between parent and teacher ratings of externalizing problem behaviors and the children’s level of EF using a difference score for each subscale of both questionnaires. Although results from the SWAN inattention subscale were consistent with the hypothesis, results from other subscales and the CTRS were not consistent with the hypothesis. Scores for the Dimension Change Card Sorting (DCCS) task was significantly related to all of the difference scores except for both hyperactivity/impulsivity subscales.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Thesis submitted to the Department of Psychology in partial fulfillment of the requirements for the degree of Master of Science.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 6, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Christopher J. Lonigan, Professor Directing Thesis; Michael Kofler, Committee Member; Christopher Schatschneider, Committee Member.

**SUBJECT:**Clinical psychology

**DEGREE:**Masters

**Record number: 138**

**FILENAME:**PakowskiIII\_fsu\_0071E\_14990.pdf

**TITLE:**Examining the Effectiveness of the American Association of Community Colleges' Pathways Project in the Florida College System

**AUTHOR:**Pakowski, Lawrence Paul, III

**MEMBER (Professor Directing Dissertation):**Iatarola, Patrice

**MEMBER (University Representative):**Klein, James D.

**MEMBER (Committee Member):**Hu, Shouping

**MEMBER (Committee Member):**Park, Toby J.

**MEMBER (Committee Member):**Schrader, Linda B.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Education

**CORPORATE NAME:**Department of Educational Leadership and Policy Studies

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (155 pages)

**ABSTRACT:**This study investigated the effectiveness of the American Association of Community Colleges (AACC) Pathways Project in the Florida College System. The project, devised as a means of turning a new corner in community college success, sought to improve lackluster persistence, retention, completion, and success rates in America’s community colleges. The AACC Pathways Project has provided an evidence- and research-based roadmap that can adapted to a variety of institutional settings and scaled up to impact all students. The theoretical framework for this study was two-fold. First, behavioral economics and the Paradox of Choice helped to explain the decisions students make (or sometimes fail to make) and helped to define “maps” for every program of study, which aimed to get students on a path, keep them on a path, and ensure that they are learning. Second, learning theory informed our understanding of how motivation and goal-setting further clarified the supports and guardrails in these “maps” by creating and fostering student self-esteem, self-efficacy, and self-determination. This study compared one participating institution with two non-participating peer institutions in the Florida College System. A robust difference-in-differences analysis was employed to both compare treatment vs. control institutions as well as pre- and post-treatment periods in the AACC Pathways Project. The outcomes of interest represented the same “Key Performance Indicators” in the AACC Pathways Project: the number of college-level credits completed in the first term and first year, gateway college-level mathematics and English completion in year one, fall-to-spring persistence, and overall college-level course completion rates in the first year. To better explore the impacts of the project in the local context, a secondary analysis investigated differential rates of change based on race/ethnicity, gender, and enrollment status (full-time or part-time)—all key demographics of interest to community colleges given their greater enrollments of underrepresented, underserved, and part-time students when compared to universities. Ultimately, this study sought to answer if guided pathways, as implemented via the AACC Pathways Project, improved student outcomes as measured by key performance indicators relating to persistence, college-level credits earned, and college-level course completion. The study was also charged with answering if the impact of the AACC Pathways Project differed for any subgroups of students at the treatment institution. The results were mixed—in some instances there were no differential changes, while in others there were higher or lower odds of measured outcomes. However, results for racial/ethnic minority groups, males, and part-time students in the treatment institution showed significant promise for the guided pathways movement. Indeed, early studies on the AACC Pathways Project have found positive changes in these outcomes. Thus, the most meaningful implication of this study is that this is provides a basis of knowledge of what is happening at one institution. Far more research and time is needed to have a better sense of the broader impacts of the guided pathways movement.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Educational Leadership and Policy Studies in partial fulfillment of the requirements for the degree of Doctor of Education.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**February 28, 2019.

**NOTE (Keywords):**AACC, American Association of Community Colleges, Community College Success, Guided Pathways, Pathways Project, Student SUccess

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Patrice Iatarola, Professor Directing Dissertation; James Klein, University Representative; Shouping Hu, Committee Member; Toby Park, Committee Member; Linda Schrader, Committee Member.

**SUBJECT:**Education, Higher

**SUBJECT:**Community colleges

**DEGREE:**Doctoral

**Record number: 139**

**FILENAME:**Pan\_fsu\_0071E\_15135.pdf

**TITLE:**High-Dimensional Statistical Methods for Tensor Data and Efficient Algorithms

**AUTHOR:**Pan, Yuqing

**MEMBER (Professor Co-Directing Dissertation):**Mai, Qing

**MEMBER (Professor Co-Directing Dissertation):**Zhang, Xin

**MEMBER (University Representative):**Yu, Weikuan

**MEMBER (Committee Member):**Slate, Elizabeth H.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Statistics

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (140 pages)

**ABSTRACT:**In contemporary sciences, it is of great interest to study supervised and unsupervised learning problems of high-dimensional tensor data. In this dissertation, we develop new methods for tensor classification and clustering problems, and discuss algorithms to enhance their performance. For supervised learning, we propose CATCH model, in short for Covariate-Adjusted Tensor Classification in High-dimensions, which efficiently integrates the low-dimensional covariates and the tensor to perform classification and variable selection. The CATCH model preserves and utilizes the structures of the data for maximum interpretability and optimal prediction. We propose a penalized approach to select a subset of tensor predictor entries that has direct discriminative effects after adjusting for covariates. Theoretical results confirm that our approach achieves variable selection consistency and optimal classification accuracy. For unsupervised learning, we consider clustering problem on high-dimensional tensor data. we propose an efficient procedure based on EM algorithm. It directly estimates the sparse discriminant vector from a penalized objective function and provides computationally efficient rules to update all other parameters. Meanwhile, the algorithm takes advantage of the tensor structure to reduce the number of parameters, which leads to lower storage costs. The performance of our method over existing methods is demonstrated in simulated and real data examples. Moreover, based on tensor computation, we propose a novel algorithm referred to as the SMORE algorithm for differential network analysis. The SMORE algorithm has low storage cost and high computation speed, especially in the presence of strong sparsity. It also provides a unified framework for binary and multiple network problems. In addition, we note that the SMORE algorithm can be applied to high-dimensional quadratic discriminant analysis problems, providing a new approach for multiclass high-dimensional quadratic discriminant analysis. In the end, we discuss some directions of the future work, including new approaches, applications and relaxing assumptions.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Statistics in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 16, 2019.

**NOTE (Keywords):**classification, clustering, high-dimension, tensor, variable selection

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Qing Mai, Professor Co-Directing Dissertation; Xin Zhang, Professor Co-Directing Dissertation; Weikuan Yu, University Representative; Elizabeth Slate, Committee Member.

**SUBJECT:**Statistics

**DEGREE:**Doctoral

**Record number: 140**

**FILENAME:**Parajuli\_fsu\_0071E\_14920.pdf

**TITLE:**Machine Learning Algorithms and Applications for Lidar, Images, and Unstructured Data

**AUTHOR:**Parajuli, Biswas

**MEMBER (Professor Directing Dissertation):**Kumar, Piyush

**MEMBER (University Representative):**She, Yiyuan

**MEMBER (Committee Member):**Liu, Xiuwen, -1966

**MEMBER (Committee Member):**Zhao, Peixiang

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Computer Science

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (121 pages)

**ABSTRACT:**Aerial imagery of geographic regions in the form of Lidar and RGB images aids different tasks like survey, urban-planning, mapping, surveillance, navigation, localization and others. Most of the applications, in general, require accurate segmentation and identification of variety of objects. The labeling is mostly done manually which is slow and expensive. This dissertation focuses on roads as the object of interest and aims to develop methods to automatically extract road networks from both aerial Lidar and images. This work investigates deep convolutional architectures that can fuse the two types of data for road segmentation. It presents a design which performs better than the state-of-the-art RGB-only methods. It also describes a simple, disk-packing based algorithm which translates the road segmentation into a OpenStreetMap-like road network graph while giving improved accuracies in terms of connectivity, topology and reduction in outliers. This dissertation also presents a truth finding algorithm based on iterative outlier removal which can be used for reaching a consensus when information sources or ensembles of trained machine learning models are at a conflict. In addition, it introduces a full and published book on Python programming based on the experiences this research provided. The hope is to contribute towards teaching and learning Python.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Computer Science in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 19, 2019.

**NOTE (Keywords):**3D Imaging, Convolutional Neural Network, Image Segmentation, Lidar, Truth Finding

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Piyush Kumar, Professor Directing Dissertation; Yiyuan She, University Representative; Xiuwen Liu, Committee Member; Peixiang Zhao, Committee Member.

**SUBJECT:**Computer science

**DEGREE:**Doctoral

**Record number: 141**

**FILENAME:**ParedesDrouet\_fsu\_0071E\_15056.pdf

**TITLE:**Preschool Full-Day, Part-Day, or Not at All: Does It Matter for Kindergarten Readiness in the U.S.?

**AUTHOR:**Paredes Drouet, Carla Maria

**MEMBER (Professor Co-Directing Dissertation):**Zuilkowski, Stephanie Simmons

**MEMBER (Professor Co-Directing Dissertation):**Park, Toby J.

**MEMBER (University Representative):**Phillips, Beth M

**MEMBER (Committee Member):**Herrington, Carolyn D.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Education

**CORPORATE NAME:**Department of Educational Leadership and Policy Studies

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (159 pages)

**ABSTRACT:**This dissertation addresses the knowledge gap about the dosage feature of preschool programs and its relationship to kindergarten readiness by asking: Does the degree of center-based preschool attendance—more than 20 hours/week (full-day), more than zero and less than 20 hours/week (part-day), or zero hours/week (no attendance)—of 4-year old children in the United States have a discernible effect in mathematics, reading, and socio-emotional tests administered at the beginning of kindergarten? I used the Early Childhood Longitudinal Study Birth Cohort (ECLS-B) to answer my research question. This high quality probability sample collected a wide range of data on young children and their families rather than assigning them to conditions. In the absence of experimental data, the quasi-experimental design that best fits the research question is a non-equivalent control group. In this design, two treated and an untreated group are compared on pre and posttest data on the same units. To minimize selection bias I first identified critical covariates that matter for selection into treatment and can be reliably measured. Then, I used propensity score analysis to match the treatment and control groups’ pretest scores and observable characteristics before directly comparing their outcomes. Results from this dissertation make evident that preschool level of attendance matters for kindergarten readiness compared no preschool. First, children who attended full-day preschool outperform their peers who did not attend in reading and math test scores at the beginning of kindergarten. Second, children who attended part-day preschool outperform their peers who did not attend in reading, math, and eagerness to learn tests scores at the beginning of kindergarten. However, results show that full-day preschool compared to part-day preschool had no statistically significant effect on cognitive skills, and had negative socio-emotional effects at the start of kindergarten. Children who attended full-day preschool performed the same in reading and math test scores- yet showed less eagerness to learn- compared to their peers who attended part-day preschool. These findings are aligned with existing literature stating that preschool has a positive effect on cognitive outcomes, particularly for low-income groups, and a negative or non-significant effect on socio-motional skills. They build upon and advance this knowledge base by empirically demonstrating the strong academic foundation that all young children develop when exposed to even a small number of hours of preschool per week. These results support the case for investments in our education system’s response that transcend the K-12 oriented approach.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Educational Leadership and Policy Studies in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 3, 2019.

**NOTE (Keywords):**early childhood, ECLS-B, full-day, part-day, preschool, propensity score matching

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Stephanie S. Zuilkowski, Professor Co-Directing Dissertation; Toby Park, Professor Co-Directing Dissertation; Beth M. Phillips, University Representative; Carolyn Herrington, Committee Member.

**SUBJECT:**Educational evaluation

**SUBJECT:**Early childhood education

**DEGREE:**Doctoral

**Record number: 142**

**FILENAME:**Parikh\_fsu\_0071N\_15233.pdf

**TITLE:**The Effect of Borago Officinalis Extract on Markers of Oxidative Stress in Lipopolysaccharide and Hydrogen Peroxide-Activated Raw 264.7 Macrophages

**AUTHOR:**Parikh, Kanisha Rakesh

**MEMBER (Professor Directing Thesis):**Arjmandi, Bahram H.

**MEMBER (Committee Member):**Salazar, Gloria

**MEMBER (Committee Member):**Sathe, Shridhar K.

**MEMBER (Committee Member):**Ralston, Penny A.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Human Sciences

**CORPORATE NAME:**Department of Nutrition, Food and Exercise Sciences

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (52 pages)

**ABSTRACT:**There are many plant herbs which are known to be rich sources of phenolic compounds and are used widely because of their anti-inflammatory and antioxidative properties. Borage (Borago officinalis) is a plant herb which is found widely in Mediterranean regions and in some parts of Asia and has been used for the treatment of chronic conditions and diseases. Gamma-linolenic acid (GLA) an omega-6 fatty acid and phenolic acids are important components found in borage, which are known for their antioxidative properties. Therefore, it is important to further examine the antioxidative properties of borage. The main aim of this study was to investigate the effect of Borago officinalis extract (BOE) on levels of biomarkers of oxidative stress including nitric oxide (NO), and reactive oxygen species (ROS) and levels of the anti-oxidant enzyme catalase in lipopolysaccharide (LPS) and hydrogen peroxide (H2O2) stimulated RAW 264.7 macrophages. High-performance liquid analysis (HPLC) analysis was used to determine the total polyphenolic content of BOE. After confirmation from the cell viability test, dosages of BOE (0, 50, 100, 200 and 300 µg/ml), followed by treatment with LPS (50 ng/ml) or H2O2 (50 ng/ml) were used in this in vitro study. Media was collected for testing the levels of NO, and the cell lysates were collected for determining levels of catalase. BOE and LPS treated cells were further examined to assess levels of ROS. The total polyphenolic content of BOE was 102.4 mg/g, with rosmarinic acid being the most abundant polyphenol. BOE decreased (P<0.05) levels of NO when induced with LPS at 300 µg/ml and when cells were stimulated with H2O2 decreased (P<0.05) NO at dosages of 100, 200, and 300 µg/ml and ROS at all dosages of BOE. The level of catalase was an increased (P<0.05) in H2O2 stimulated macrophages treated with 300 µg/ml BOE. The results of this study suggest that borage possesses antioxidative properties through a reduction in NO and ROS. Further analysis is required to examine the pathways responsible.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the Department of Nutrition, Food and Exercise Sciences in partial fulfillment of the requirements for the degree of Master of Science.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 18, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Bahram H. Arjmandi, Professor Directing Thesis; Gloria Salazar, Committee Member; Shridhar K. Sathe, Committee Member; Penny A. Ralston, Committee Member.

**SUBJECT:**Nutrition

**DEGREE:**Masters

**Record number: 143**

**FILENAME:**Park\_fsu\_0071E\_15054.pdf

**TITLE:**Meeting-or-Beating Earnings Benchmarks: The Effect of Natural Disasters

**AUTHOR:**Park, Jonghan

**MEMBER (Professor Directing Dissertation):**Zhang, Tianming

**MEMBER (University Representative):**Cheng, Yingmei

**MEMBER (Committee Member):**Billings, Bruce K.

**MEMBER (Committee Member):**Pierce, Spencer R.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Business

**CORPORATE NAME:**Department of Accounting

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (69 pages)

**ABSTRACT:**I examine whether managers are more likely to meet-or-beat earnings benchmarks when firms experience natural disasters. When a natural disaster strikes and causes significant damages, it could negatively affect a firm’s financial performance, potentially resulting in firms missing earnings targets. In this type of situation, incentives for managers to meet static earnings benchmarks (i.e., zero or last year’s earnings) might weaken because they can shift the blame for poor performance to natural disasters. On the other hand, managers may have stronger incentives to meet dynamic earnings benchmarks (i.e., analyst forecasts) because analysts take into consideration the effect of disasters and missing this benchmark could signal that the effect of disasters was worse than expected. In addition, subjective estimation of losses or charges related to disasters may enable managers to more easily engage in non-GAAP exclusions management to increase the likelihood of meeting analysts’ estimates. Using a comprehensive dataset of natural disasters occurring in the U.S. since 1989, I find that firms affected by natural disasters are more likely to meet-or-beat analyst forecasts through non-GAAP exclusions management. This paper extends the earnings benchmark literature by providing evidence that, when facing unexpected external shocks such as natural disasters, managers could utilize a crisis to make opportunistic accounting choices.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Accounting in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 27, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Tianming Zhang, Professor Directing Dissertation; Yingmei Cheng, University Representative; Bruce Billings, Committee Member; Spencer Pierce, Committee Member.

**SUBJECT:**Accounting

**DEGREE:**Doctoral

**Record number: 144**

**FILENAME:**Parker\_fsu\_0071N\_15196.pdf

**TITLE:**Robert Douglas: American Missionary in the Cold War Middle East

**AUTHOR:**Parker, William R. (William Riley)

**MEMBER (Professor Directing Thesis):**Hanley, Will, 1974-

**MEMBER (Committee Member):**McClive, Catherine Elisabeth

**MEMBER (Committee Member):**Özok-Gündoğan, Nilay

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of History

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (85 pages)

**ABSTRACT:**Robert Douglas was a Church of Christ missionary to Libya, Egypt, and Lebanon during the 1960s. Traveling during this period introduced Douglas to the reality of post-colonial context of the countries. He and his family lived as foreigners and missionaries in these countries, interacting with the American oil industry in Libya, Egyptian and Arab nationalism, and the impact of the Cold War on the Arab World. Although Douglas did not notice the Cold War around him, it impacted his time there in important ways. In all his travels, the United States and the Soviet Union struggled to gain influence over the young countries in which he resided. His religiosity encouraged him to travel to these countries under false pretenses. In Libya he could come in as a preacher to the American and British oil workers in Benghazi, but desired to be a missionary, while in Egypt he and his family came in as tourists and had to renew these visas but created a steady congregation of converts through missionary efforts. Both actions were illegal, due to laws in Libya and Egypt, and these laws led to the retraction of he and his family’s visas. He made his way to Lebanon where he constructed a missions’ school for recent converts. The Six Days’ War led to his leaving Lebanon and returning to the United States. Upon his return, he attended Fuller Seminary and the University of Southern California and became regarded as an expert in Muslim-aimed evangelism among Protestant evangelicals. His career challenges standard missionary narratives through his independent missionary activities, highlights American understandings and misconceptions of Islam, and the reality of the Cold War in the Middle East. All of this makes his journey into a historical narrative to challenge and address the larger macrohistories for American Christian missionaries abroad.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the Department of History in partial fulfillment of the requirements for the degree of Master of Science.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 12, 2019.

**NOTE (Keywords):**Christianity, Cold War, Islam, Missionary, Modernity, Nationalism

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Will Hanley, Professor Directing Thesis; Nilay Ozok Gundogan, Committee Member; Catherine Elisabeth McClive, Committee Member.

**SUBJECT:**Middle East--History

**SUBJECT:**Religions--History

**SUBJECT:**Islam and culture

**DEGREE:**Masters

**Record number: 145**

**FILENAME:**Patterson\_fsu\_0071E\_14978.pdf

**TITLE:**The Few, the Proud: Gender and the Marine Corps Body

**AUTHOR:**Patterson, Sarah Elizabeth

**MEMBER (Professor Directing Dissertation):**Sinke, Suzanne M.

**MEMBER (University Representative):**Moore, Dennis

**MEMBER (Committee Member):**Piehler, G. Kurt

**MEMBER (Committee Member):**Upchurch, Charles, 1969-

**MEMBER (Committee Member):**Koslow, Jennifer Lisa, 1970-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of History

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (295 pages)

**ABSTRACT:**This project examines the changing shape of femininity and masculinity for Marines from World War I to the Korean War, focusing on the ways that the body serves as a canvas for demonstrating the negotiation of gender roles and the Marine Corps image. Gender has been a constant issue for the military. However, few historical studies consider the ways that the Marine Corps’ status as a particularly elite, masculine institution impacted the desired image of femininity for its female recruits and how this image changed over time. The hyper-masculine nature of the military influenced the relationship between masculinity and femininity for both servicemen and women. My project looks at these changes in masculinity and femininity by placing gender identity within the context of the hyper-masculine military environment. R.W. Connell’s Masculinities, Anthony Rotundo’s American Manhood, and Aaron Belkin’s Bring Me Men assist in putting gender identity in the military into a more complex and nuanced context, especially focusing on masculinity’s centrality to the American military institution. Belkin, in particular, argues that military masculinity has never been entirely devoid of feminine elements. Aspects of femininity have long been a part of military life, from domestic responsibilities often associated with women to close same sex companionship between soldiers. While generally considered less masculine when taken as separate behaviors, they did not seem problematic in a military context. This leads to the conclusion that the incorporation of women into the military was not a radical introduction of femininity into a solely masculine environment, but rather a more complicated shift in the relationship between gender and occupation. This project’s conclusions support this kind of closer relationship between masculinity and femininity in the military context. Francine D’Amico and Laurie Weinstein’s Gender Camouflage, Melissa Ming Foynes, Jillian C. Shipherd, and Ellen F. Harrington’s “Race and Gender Discrimination in the Marines,” Melissa S. Herbert’s Camouflage Isn’t Only for Combat, Heather J. Höpfl’s “Becoming a (Virile) Member: Women and the Military Body,” Leisa D. Meyer’s Creating GI Jane, and Sara L. Zeigler and Gregory G. Gunderson’s Moving Beyond GI Jane address this shift in gender relations and the resulting tension between military men and women throughout the twentieth and twenty-first centuries I investigate changes in military gender identity by looking at legislation and regulations controlling gender and sexuality in the military, media depictions of Marines, and the ways that gendered military identity plays out on the body, especially through physical fitness, uniforms, and bodily maintenance. The Marine Corps documented their ideas of normative masculine and feminine Marine bodies through pictures, propaganda, and newsletters. Examination of these different characteristics of the ideal body allow for comparison through time of the ways that Marines presented themselves to society, as well as the methods the Corps utilized to encourage images advantageous to its purposes. Such comparisons show changes in the perception of gender identity through time, as well as new norms of appearance and behavior that developed. This evidence illustrates the complicated and often contradictory relationship between masculinity and femininity that all Marines, male and female, negotiate. This project illustrates the significance of these frequently gendered representations of Marine bodies through time. They show the negotiation of gender within the Corps and how assumptions of gender roles shifted from one war to the next. Understanding these changes helps explain the tensions and conflicts which developed between male and female Marines during different periods, as well as creating a framework for investigating these tensions into the contemporary era. The primary sources used for this project focus on the appearance of Marines, male and female, and include national legislation related to Marines and military regulations enforcing conformity in dress and appearance. Memoirs of Marines, publications intended for Marine readers, as well as publications depicting Marines aid in gaining a better idea of the function of gender for Marines, especially in relation to their interactions between male and female Marines. These documents show the changes occurring in expectations about femininity and masculinity in the Marine Corps over time. Public publications, such as general interest magazines, women’s magazines, and newspapers, showed public ideas of Marines’ gender and their relationship to civilian American gender ideals. This project explores the changing shape of normative Marine Corps bodies and the impact of ideas of masculinity and femininity in their deployment as methods of supporting the services’ goals.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of History in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**February 8, 2019.

**NOTE (Keywords):**Gender, Korean War, Marine Corps, US Military, World War I, World War II

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Suzanne Sinke, Professor Directing Dissertation; Dennis Moore, University Representative; Kurt Piehler, Committee Member; Charles Upchurch, Committee Member; Jennifer Koslow, Committee Member.

**SUBJECT:**United States--History

**SUBJECT:**Gender expression

**SUBJECT:**Study and teaching

**SUBJECT:**Gender identity

**SUBJECT:**Study and teaching

**DEGREE:**Doctoral

**Record number: 146**

**FILENAME:**Pennington\_fsu\_0071E\_15083.pdf

**TITLE:**Siroheme Biosynthesis and Regulation of Siroheme Deficiency

**AUTHOR:**Pennington, Joseph Masters, IV

**MEMBER (Professor Directing Dissertation):**Li, Hong, (Chemistry and Biochemistry)

**MEMBER (University Representative):**Jones, Kathryn M.

**MEMBER (Committee Member):**Stroupe, M. Elizabeth (Margaret Elizabeth)

**MEMBER (Committee Member):**Blaber, Michael

**MEMBER (Committee Member):**Yang, Wei

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Institute of Molecular Biophysics

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (97 pages)

**ABSTRACT:**This thesis analyzes the structure and function of enzymes involved in the biosynthesis of the tetrapyrrole cofactor, siroheme, a critical cofactor used in sulfur and nitrogen metabolism in plants, bacteria, and some archaea. The multifunctional enzyme, siroheme synthase, from Salmonella typhimurium and two newly identified enzymes from Mycobacterium tuberculosis are used to understand how these ancient enzymes function. Additionally, the effects of siroheme deficiency in Escherichia coli are studied in the context of sulfite reductase, an enzyme central to sulfur assimilation. Siroheme synthase (CysG) is a trifunctional enzyme responsible for the three terminal steps of siroheme biosynthesis in Salmonella typhimurium. The enzyme is composed of two functional modules, CysGA that accomplishes the first reaction, and CysGB that accomplishes the final two reactions. Interestingly, the same active site in CysGB is responsible for two very distinct chemistries where in other structural homologs, this is not observed. The work here shows how CysG distinguishes between these reactions to produce siroheme. Point mutagenesis, in vivo complementation assays, spectroscopic activity assays, and X-ray diffraction studies were used to piece together how CysG binds and orients the substrates and intermediates needed to catalyze siroheme. The co-crystal structures of precorrin-2-, sirohydrochlorin-, and cobalt-sirohydrochlorin-bound CysG were solved allowing characterization of the residues involved in binding and how their orientations change throughout catalysis. In Mycobacterium tuberculosis, the enzyme (or enzymes) responsible for siroheme production are unknown even though the siroheme cofactor is present in the bacteria’s sulfur metabolic pathway. This work reports the identification and characterization of two enzymes, MtCysG and MtChe1, that work together to produce siroheme. Molecular cloning teachniques, in vivo complementation assays, spectroscopic activity assays, and X-ray diffraction were used to isolate and identify MtCysG and MtChe1 as the enzymes necessary and sufficient for siroheme production. Interestingly, MtCysG is structurally homologous to Salmonella typhimurium CysG but is not a functional chelatase. Instead, MtChe1 fulfills this function to catalyze siroheme. Assimilatory NADPH-sulfite reductase (SiR) from Escherichia coli catalyzes the six-electron reduction of sulfite to sulfide. Two subunits, one a flavin-binding flavoprotein (SiRFP) and the other an iron-containing hemoprotein (SiRHP), assemble to make a holoenzyme ~800 kDa. How the two subunits assemble is not known. The iron-rich cofactors in SiRHP are unique because they are a covalent arrangement of a Fe4S4 cluster attached through a cysteine ligand to an iron-containing porphyrinoid called siroheme. The link between cofactor biogenesis and SiR stability is also ill-defined. Through hydrogen/deuterium exhchange, biochemical analysis and small-angle X-ray scattering (SAXS) we explore how the holoenzyme assembles and the structure of the N-terminal oligomerization domain of SiRHP. Apo-SiRHP forms a homotetramer, also dependent on its N-terminus, that is unable to assemble with SiRFP. From these results, we propose that homo-tetramerization of apo-SiRHP serves as a quality control mechanism to prevent formation of inactive holoenzyme in the case of limiting cellular siroheme.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Institute of Molecular Biophysics in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 12, 2019.

**NOTE (Keywords):**chelatase, precorrin-2, siroheme, sirohydrochlorin, sulfite reductase, tetrapyrrole biosynthesis

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Hong Li, Professor Directing Dissertation; Kathryn M. Jones, University Representative; M. Elizabeth Stroupe, Committee Member; Michael Blaber, Committee Member; Wei Yang, Committee Member.

**SUBJECT:**Biophysics

**SUBJECT:**Molecular biology

**SUBJECT:**Biochemistry

**DEGREE:**Doctoral

**Record number: 147**

**FILENAME:**Pepple\_fsu\_0071E\_14966.pdf

**TITLE:**Americans at the Leipzig Conservatory (1843–1918) and Their Impact on American Musical Culture

**AUTHOR:**Pepple, Joanna

**MEMBER (Professor Directing Dissertation):**Seaton, Douglass

**MEMBER (University Representative):**Williamson, George S.

**MEMBER (Committee Member):**Eyerly, Sarah

**MEMBER (Committee Member):**Quinn, Iain, 1973-

**MEMBER (Committee Member):**Von Glahn, Denise, 1950-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2018

**PHYSICAL DESCRIPTION:**1 online resource (241 pages)

**ABSTRACT:**In 1842 Felix Mendelssohn gained approval from the Prussian King Friedrich Wilhelm IV to apply the late Supreme Court Justice’s Heinrich Blümner’s 20,000-Thaler gift to the founding of Germany’s first music education institution dedicated to the higher-level training of musicians. The establishment of the Leipzig Conservatory in 1843 was a milestone in Germany’s history, as this was Germany’s first national conservatory of music, with the goal to train and educate “complete” musicians in both applied and theoretical studies. Due to its highly-esteemed faculty, the Leipzig Conservatory immediately drew attention from music students not only nationally but also internationally. The Leipzig Conservatory was known for its “conservative” leanings as well as the strong foundation students received in harmony, counterpoint, and voice-leading. The pedagogy of the Leipzig Conservatory not only had a great impact in Germany and the surrounding European countries, but its influence reached across the Atlantic to American musical life. Nineteenth-century Americans held German musical training in high regard. Between 1846 and 1918 over 1,500 Americans traveled across the Atlantic to study with the renowned faculty at the Leipzig Conservatory. Receiving a comprehensive music education and being exposed to world-class visiting soloists such as Clara Schumann and Franz Liszt, these American students returned to the United States as music teachers, administrators, music writers and publishers, and performers, prepared to influence their music culture in numerous ways. These American individuals had a great impact in numerous cities throughout the United States, and several of them had a role in founding America’s first music conservatories: Oberlin Conservatory of Music (1865) and New England Conservatory of Music (1867). By studying the original documents and concert programs at these institutions, one can trace direct pedagogical approaches and institutional policies transferred from Leipzig to Oberlin and Boston. Furthermore, many early faculty members at Oberlin and NEC themselves had studied at the Leipzig Conservatory, bringing Leipziger tastes and pedagogy to American students. While the Leipzig influence impacted Oberlin and NEC greatly, its pedagogy and principles shaped many other aspects of American music life and education throughout multiple cities and regions in the United States, leaving lasting imprints on American music culture, including music education, concert life, music criticism, and composition. The supplementary Excel spreadsheet shows Leipzig Conservatory faculty members and the duration of their tenure at the Conservatory.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the College of Music in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Fall Semester 2018.

**NOTE (Date of Defense):**December 14, 2018.

**NOTE (Keywords):**America\*, Conservatory, Leipzig, New England, Oberlin, pedagogy

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**S. Douglass Seaton, Professor Directing Dissertation; George Williamson, University Representative; Sarah Eyerly, Committee Member; Iain Quinn, Committee Member; Denise Von Glahn, Committee Member.

**SUBJECT:**Music--Instruction and study

**DEGREE:**Doctoral

**Record number: 148**

**FILENAME:**Pereverzeva\_fsu\_0071E\_15016.pdf

**TITLE:**Mieczysław Weinberg: Concerto for Cello and Orchestra, and 24 Preludes for Solo Cello

**AUTHOR:**Pereverzeva, Aleksandra

**MEMBER (Professor Directing Treatise):**Sauer, Greg

**MEMBER (University Representative):**Brewer, Charles E. (Charles Everett)

**MEMBER (Committee Member):**Punter, Melanie

**MEMBER (Committee Member):**Jiménez, Alexander, 1963-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (50 pages)

**ABSTRACT:**The purpose of this treatise is to introduce the music of the Soviet composer of Polish-Jewish origin, Mieczysław Weinberg (1919-1996) to a wide audience. Weinberg’s life took place during the very difficult period following World War I through the second world war. Not only did he feel the terrible consequences of the Nazi efforts to exterminate Jews, but he also experienced the terrors associated with being an artist in the Soviet Union under Stalin. Weinberg’s music reflects its historical context and the tragic events that impacted his own life and the lives of so many others. This is one reason his compositions are important and valuable. He also had a close friendship with Dmitry Shostakovich, and they inspired one another’s creative work in many ways. Weinberg’s music reflects a diversity of genres and styles. In addition to the large-scale works dedicated to the heavy themes of war, fascism, and death, he also wrote music for movies, cartoons, circuses, and children. Like Weinberg’s life, his music had a difficult fate, as it was obscured for many years. Fortunately, Weinberg’s music has gained increased attention in recent years, especially in Europe. There have been several festivals dedicated to his work held in Liverpool (UK), Rochester (USA), Bregenze (Switzerland), and Moscow (Russia). Recordings of his compositions have been released by large record labels, including “Olympia” (UK), and "Russkiy disk” (Russia). The Danel String Quartet, a Belgian group, recently made a complete recording of all seventeen quartets written by Weinberg. Several renowned conductors have contributed to the promotion of Weinberg’s music, including Thomas Sanderling, the co-initiator of the International Mieczysław Weinberg Society, and Thord Svedlund. This treatise provides information about the composer’s life, an overview of his work, and style analyses of his Concerto for Cello and Orchestra Op. 43 (1948) and his 24 Preludes for Solo Cello (1960). The Concerto and the Preludes are historically significant and musically engaging additions to the standard cello repertoire. The Concerto consists of four contrasting and highly expressive movements with different characters and moods—lyrical, dramatic, powerful, sorrowful, and triumphant. The diversity in the work, in its melodic features and dramatic qualities, make it accessible to a wide range of audiences. The 24 Preludes is a challenging work that features technical variety and extended techniques. In this collection we see Weinberg demonstrating his musical experience, knowledge, and creativity. Practice suggestions for the Concerto and the Preludes are provided at the end of their respective chapters.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Treatise submitted to the College of Music in partial fulfillment of the requirements for the degree of Doctor of Music.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 19, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Gregory Sauer, Professor Directing Treatise; Charles E. Brewer, University Representative; Alexander Jiménez, Committee Member; Melanie Punter, Committee Member.

**SUBJECT:**Music

**SUBJECT:**Performing arts

**DEGREE:**Doctoral

**Record number: 149**

**FILENAME:**Petet\_fsu\_0071N\_15142.pdf

**TITLE:**Impacts of Microbial Community Structure on Denitrification Rates in the Rhizosphere of J. Roemerianus and S. Alterniflora in a Gulf of Mexico Mixed Marsh

**AUTHOR:**Petet, Rachel Anne

**MEMBER (Professor Directing Thesis):**Mason, Olivia Underwood

**MEMBER (Committee Member):**Knapp, Angela Noel, 1976-

**MEMBER (Committee Member):**Kranz, Sven Alexander

**MEMBER (Committee Member):**Chadwick, Brian P.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Earth, Ocean and Atmospheric Science

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (33 pages)

**ABSTRACT:**Marshes are particularly important ecosystems, providing long-term soil carbon storage, flood protection and nutrient filtration. Nutrient filtering, specifically nitrate removal, is largely the result of belowground microbially mediated denitrification. Previous studies reveal that denitrification rates differ in Spartina alterniflora and Juncus roemerianus patches but determining how the associated microbial communities contribute to these differences is challenged by the inherent physicochemical variability in the belowground of plants at different elevations in the marsh. Here we had a unique opportunity to evaluate denitrification rates and the belowground microbial community in J. roemerianus and S. alterniflora collocated at the same elevation, thus experiencing the same inundation cycles, in a saltwater marsh. To determine denitrification rates sediment slurry incubations (15N-nitrate) were used. The microbial community structure was determined using “iTag” sequencing of 16S rRNA gene amplicons. Slurry experiments revealed that denitrification rates were consistently higher in J. roemerianus compared to S. alterniflora. Analysis of 16S rRNA exact amplicon sequence variants (ASVs) showed that the microbial communities were similar in both plant types, although oscillations in the abundance of some ASVs was observed. To link the rate and microbial community data, Random Forest Modeling (RFM) was used to determine if specific microbes could be accurate predictors of higher or lower denitrification rates. RFM identified ASVs classified as Deltaproteobacteria; Desulfobacteraceae and Chloroflexi; Anaerolineaceae as the most important predictors of denitrification rates. These microbial predictors were also identified as core members of the rhizosphere of both plants. The Desulfobacteraceae core member, indicates higher denitrification rates, while the Anaerolineaceae core member points towards lower rates of nitrate removal. Desulfobacteraceae are known sulfate reducers, however some have been shown to utilize both nitrate and sulfate to grow chemolithoautotrophically by coupling sulfide oxidation to dissimilatory nitrate reduction. In fact, this pathway was identified in metagenomic and metatranscriptomic datasets from one of the samples analyzed herein. Collectively, our data revealed that J. roemerianus promoted greater belowground nitrate removal compared to S. alterniflora which may result from different plant characteristics that lead to oscillations in the abundance and activity of core members of the microbial community that can serve as predictors of denitrification rates. Further, the data suggested that this reaction may be mediated by previously unsuspected sulfate reducing bacteria in our saltmarsh ecosystem.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Thesis submitted to the Department of Earth, Ocean and Atmospheric Science in partial fulfillment of the requirements for the degree of Master of Science.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 28, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Olivia Mason, Professor Directing Thesis; Angela Knapp, Committee Member; Sven Kranz, Committee Member; Brian Chadwick, Committee Member.

**SUBJECT:**Marine biology

**DEGREE:**Masters

**Record number: 150**

**FILENAME:**Pham\_fsu\_0071E\_14987.pdf

**TITLE:**The M-DCPS iHEAT Experience: Teacher Perceptions of the Relationship between the Program and Instructional Practices

**AUTHOR:**Pham, Kathleen T.

**MEMBER (Professor Directing Dissertation):**Zuilkowski, Stephanie Simmons

**MEMBER (University Representative):**McDowell, Stephen D., 1958-

**MEMBER (Committee Member):**Akiba, Motoko

**MEMBER (Committee Member):**Schwartz, Robert A.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Education

**CORPORATE NAME:**Department of Educational Leadership and Policy Studies

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (122 pages)

**ABSTRACT:**This qualitative case study examined the professional development practices at 2 of the 9 schools involved in the Incentives for Highly Effective Administrators and Teachers (iHEAT) Program in Miami-Dade County Public Schools from 2013-2017. The iHEAT Program was funded through a Teacher Incentive Fund (TIF) grant and provided participating schools with Peer Review Teachers who were fully released from classroom duties and served as full time instructional coaches, and provided job-embedded professional development. The program also awarded stipends for certain professional development activities and for highly effective teaching performance, as measured by the district’s teacher evaluation system. This research was conducted to determine how the teachers who participated in the program both experienced the program and perceived the relationship between those experiences and their instructional practices. Background on the history of professional development, important definitions, and current professional learning standards are all provided. The literature review starts with studies giving the definition and history of professional development in the United States. It then builds on that information by summarizing research on the current state of professional development in the United States and in other countries. The review also provides a local context, by explaining the state of professional learning in Florida generally, and in Miami-Dade County Public Schools, specifically. Finally, it explores the research on the importance of the teacher as a factor in instructional effectiveness. Some gaps in the literature on professional learning are identified. iHEAT participating teachers were interviewed, and the data collected illustrate the experiences and perceptions of the teachers. An analysis of these data shows the teachers’ perceptions of the relationship between those experiences and their instructional practices. Administrators at the 2 schools, including both principals and assistant principals, also participated in interviews designed to determine how they viewed the program and the teachers’ experiences, as well as whether they perceived a relationship between the teachers’ participation and their instructional practices. The interview data indicate that the iHEAT Program was positively received in the schools, that teachers learned and grew from their experiences, and that there are some practices which will continue in the schools after the conclusion of the program. Teachers and administrators noted improvements in the school culture and collaboration. They also provided examples of differentiation and increased use of data analysis in their practice. In addition, the educators reported aspects of the educational practices implemented during iHEAT that remain in the schools and contribute to the ongoing professional growth of the teachers. This study also provides lessons learned and conclusions about what aspects of the iHEAT professional development practices might be useful for educators in other contexts. District staff considering peer review programs, teacher leaders developing professional learning experiences, and classroom teachers involved in coaching programs all might find the results of this study relevant. As educational institutions shift from traditional professional development models to more collaborative modes of learning, for both teachers and students, a new approach is needed, and this study will suggest policies and practices that might be studied further or replicated.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Educational Leadership and Policy Studies in partial fulfillment of the requirements for the degree of Doctor of Education.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**February 19, 2019.

**NOTE (Keywords):**peer review, professional development, professional learning, professional learning communities, teacher evaluation, teacher quality

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Stephanie Zuilkowski, Professor Directing Dissertation; Stephen McDowell, University Representative; Motoko Akiba, Committee Member; Robert A. Schwartz, Committee Member.

**SUBJECT:**Education

**SUBJECT:**Educational evaluation

**SUBJECT:**Educational leadership

**DEGREE:**Doctoral

**Record number: 151**

**FILENAME:**Pierson\_fsu\_0071E\_15014.pdf

**TITLE:**Two Chapters on Firm Insiders

**AUTHOR:**Pierson, Matthew

**MEMBER (Professor Directing Dissertation):**Hutton, Irena

**MEMBER (University Representative):**Semykina, Anastasia

**MEMBER (Committee Member):**Autore, Donald M.

**MEMBER (Committee Member):**Liu, Baixiao

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Business

**CORPORATE NAME:**Department of Finance

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (89 pages)

**ABSTRACT:**Utilizing a new understanding of firm compliance responses to regulation, I find that Sarbanes-Oxley helped both identify and reduce abnormal returns to informed insider trading. The number of forms insiders file post-SOX increased by 175% per year, causing an 84% increase in firm compliance policies to handle the implicit costs to filing by selecting staff to oversee and orchestrate the trading of insiders. Insiders sign their own insider trading forms identify deviation from firm policy and signal informed insider trading reaping abnormal annualized returns to their purchases (sales) of 9.6% (-10.8%). Using this novel measure to identify informed insider trading, Sarbanes-Oxley cuts abnormal returns nearly in half. I find that SOX does so by limiting insiders’ ability to sequence smaller trades multiple times, a previously undisclosed strategy. Sarbanes-Oxley’s insider trading provisions work as intended—to limit insiders from using their informational advantages to lucratively trade—and it does so by increasing both the amount and speed of disclosure. Furthermore, firm insiders, as a subgroup of the top 1% in U.S. wealth and income, do not follow traditional theoretical savings motives. Using new data on individuals’ use of structured savings products (SSPs), I combine the literatures of individual savings motives and offshoring, which cannot explain the wealthy’s savings and lack strong theoretical motives, respectively. Wealthy individuals are driven by an unstudied motive—asset protection—with those most sensitive to this motive saving 25% more in SSPs, and, conditional on using SSPs, saving $589,660 more per year in these products when facing litigation risk. This relationship is causally identified using the staggered adoption of Domestic Asset Protection Trusts as an exogenous shock to the structured savings options of individuals. Tax avoidance, a motive from the literature on offshoring, provides little benefit to insiders—avoiding 0.076% of taxes—while individuals do not respond to exogenous changes in their tax environment. Bequest preferences, a motive from individual savings, predicts bequests to be at least 89.47% less than their empirically observed estates, leaving most of individuals’ savings unexplained. Moreover, individuals most sensitive to asset protection motives save 5.33 times more in bequest products that retain control over these savings, indicating savings earmarked for bequests may still be revoked. By examining a new motive for savings, asset protection, I unite the two previously separate literatures of individual savings motives and offshoring.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Finance in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 8, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Irena Hutton, Professor Directing Dissertation; Anastasia Semykina, University Representative; Don Autore, Committee Member; Baixiao Liu, Committee Member.

**SUBJECT:**Finance

**DEGREE:**Doctoral

**Record number: 152**

**FILENAME:**Plante\_fsu\_0071E\_15059.pdf

**TITLE:**Waveland

**AUTHOR:**Plante, Jessica M. (Jessica Marie)

**MEMBER (Professor Directing Dissertation):**Kirby, David, 1944-

**MEMBER (University Representative):**Cuevas, Bryan J., 1967-

**MEMBER (Committee Member):**Hamby, Barbara, 1952-

**MEMBER (Committee Member):**Roberts, Diane, 1959-

**MEMBER (Committee Member):**Stilling, Robert, 1977-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of English

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (70 pages)

**ABSTRACT:**The dissertation manuscript, Waveland, is a sequence of lyric and narrative poems that form a loosely-structured story about the life of a character called The Navy Wife. The poems in the collection explore trauma and healing through braided topics and motifs, and the manuscript is arranged so that The Navy Wife’s exploration of self develops along a hero’s journey narrative arc. A hero’s journey includes the following components: a call to action, acceptance of the call, rising action, defeat, death and rebirth, atonement, the journey home, and the establishment of a new normal. As a hero’s journey, Waveland’s narrative structure is circular; the speaker ends where she began though she is now transformed by her reconciliation with her past.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of English in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 19, 2019.

**NOTE (Keywords):**Dating, Death, Divorce, Marriage, Miscarriage, Poetry

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**David Kirby, Professor Directing Dissertation; Bryan Cuevas, University Representative; Barbara Hamby, Committee Member; Diane Roberts, Committee Member; Robert Stilling, Committee Member.

**DEGREE:**Doctoral

**Record number: 153**

**FILENAME:**Pope\_fsu\_0071N\_15205.pdf

**TITLE:**When 'They' Are Listening: Sociolinguistic Variation in John F. Kennedy's Cold War Speeches during 1961

**AUTHOR:**Pope, Steven John

**MEMBER (Professor Directing Thesis):**Houck, Davis W.

**MEMBER (Committee Member):**Raney, Arthur A.

**MEMBER (Committee Member):**Sunderman, Gretchen L.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Communication and Information

**CORPORATE NAME:**School of Communication

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (107 pages)

**ABSTRACT:**When John F. Kennedy took office in January 1961, the United States entered a new era of Cold War diplomacy. During the era ridden with propaganda and imminent nuclear apocalypse, the presidential address served as a powerful tool to promote international peace while simultaneously threatening the opposition. Rather than fixate on President Kennedy’s rhetorical initiatives as they appear in transcriptions, the following identifies President Kennedy’s sociophonetic initiatives through linguistic methodology. By utilizing the phonetic software tool, Praat, the succeeding analysis produces a speaking profile for three of Kennedy’s 1961 speeches. With consistent content and context across each speech, President Kennedy’s ability to adapt his speaking style - dependent on the present audience - is distinguished. Considering Kennedy’s speeches were often influenced by speech writers, the President’s orality and sociophonetic variation provides evidence to his individual attempts to appeal to specific audiences. To further critique Kennedy’s use of language when appealing to his constituents, specific “signals” directed to the opposition are additionally analyzed. Beneficial to historians, rhetoricians, and linguists this work returns to a basis in orality in an effort to promote linguistic methodologies in the rhetorical domain.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the School of Communication in partial fulfillment of the requirements for the degree of Master of Arts.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 15, 2019.

**NOTE (Keywords):**Cold War, John F. Kennedy, Praat, Presidential Rhetoric, Sociolinguistics, Style

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Davis W. Houck, Professor Directing Thesis; Arthur Raney, Committee Member; Gretchen Sunderman, Committee Member.

**SUBJECT:**Rhetoric

**SUBJECT:**Linguistics

**SUBJECT:**History

**DEGREE:**Masters

**Record number: 154**

**FILENAME:**Quraishi\_fsu\_0071E\_15038.pdf

**TITLE:**Teachers' Individual and Collective Sense-Making of a Social and Emotional Learning Program

**AUTHOR:**Quraishi, Shea O'Rourke

**MEMBER (Professor Directing Dissertation):**Rutledge, Stacey A.

**MEMBER (University Representative):**Jones, Ithel

**MEMBER (Committee Member):**Akiba, Motoko

**MEMBER (Committee Member):**Preston, Courtney

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Education

**CORPORATE NAME:**Department of Educational Leadership and Policy Studies

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (196 pages)

**ABSTRACT:**The K-12 education system in the United States is rife with debate about what content should be taught and about how students’ achievement with that content should be measured. While much of the public discourse focuses on traditional academic areas such as literacy and math, increasingly, educators are understanding that social and emotional learning (SEL) is a critical element of students’ school experiences and of their preparedness for life after graduation. Also called non-cognitive skills, SEL typically includes explicit, systematic instruction on the management of emotions, relationships, and decision-making, as well as teaching techniques that are integrated throughout all instruction. An increasing number of schools and districts are experimenting with SEL programming. This qualitative study used a case study approach to investigate an often-overlooked aspect of successful SEL programming: the teachers who are tasked with implementing it. Specifically, the study considered the sense-making of teachers at one high-poverty, pre-kindergarten through eighth grade school regarding one particular SEL program, Community Building Sessions™. Insights from this study serve to inform future research and decisions regarding SEL programming design and implementation at Frameworks of Tampa Bay, Inc., a nonprofit organization that supports teachers and administrators in implementing SEL curricula in pre-kindergarten through grade 12. More broadly, this study’s findings contribute to the collective understanding about how teachers view and think about SEL.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Educational Leadership and Policy Studies in partial fulfillment of the requirements for the degree of Doctor of Education.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 25, 2019.

**NOTE (Keywords):**21st century skills, character education, SEL, social and emotional learning, social emotional learning, teacher coaching

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Stacey A. Rutledge, Professor Directing Dissertation; Ithel Jones, University Representative; Motoko Akiba, Committee Member; Courtney Preston, Committee Member.

**SUBJECT:**Education

**SUBJECT:**Educational psychology

**SUBJECT:**Educational evaluation

**DEGREE:**Doctoral

**Record number: 155**

**FILENAME:**Ramalho\_fsu\_0071N\_15225.pdf

**TITLE:**Psychological Happiness and Wretched Sanctuary

**AUTHOR:**Ramalho, Todd

**MEMBER (Professor Directing Thesis):**LeBar, Mark

**MEMBER (Committee Member):**Mele, Alfred R., 1951-

**MEMBER (Committee Member):**Bishop, Michael A.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Philosophy

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (43 pages)

**ABSTRACT:**Psychological happiness is a deeply important phenomenon, according to Dan Haybron. So important, he claims, that it’s a central component of the good life. But it isn’t alone at the center: psychological happiness shares that privileged space with something he takes to be far more important: good character. As such, for him, the pursuit of psychological happiness must be compatible with the demands of good character. I aim to show why there is compelling reason to doubt that such compatibility exists. This is how I’ll proceed: in chapter two, I’ll explain Haybron’s conception of psychological happiness. This will include describing the general structure of the phenomenon, identifying its most fundamental aspect, and detailing a couple of constraints that limit its pursuit. In chapter three, I’ll raise a challenge from Martha Nussbaum to those who would, like Haybron, prioritize happiness-seeking in their conceptions of good lives. Building from there, I’ll describe what I take to be a deep problem for Haybron’s account of psychological happiness, a hidden one that would violate one of the constraints on its pursuit. In chapter four, I’ll argue that the solution to Haybron’s problem is incompatible with the pursuit of psychological happiness itself. The fallout will be that on Haybron’s conception of psychological happiness, the pursuit of it can never begin. Finally, in chapter five, I’ll raise a pair of objections to my argument and show how they fail.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the Department of Philosophy in partial fulfillment of the requirements for the degree of Master of Arts.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 15, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Mark LeBar, Professor Directing Thesis; Alfred Mele, Committee Member; Michael Bishop, Committee Member.

**SUBJECT:**Philosophy

**DEGREE:**Masters

**Record number: 156**

**FILENAME:**Rasheed\_fsu\_0071E\_15146.pdf

**TITLE:**Surface Subgroups of 3-Manifold Groups

**AUTHOR:**Rasheed, Mohammad Aamir

**MEMBER (Professor Directing Dissertation):**Heil, Wolfgang H.

**MEMBER (University Representative):**Wahl, Horst

**MEMBER (Committee Member):**Bowers, Philip L., 1956-

**MEMBER (Committee Member):**Ballas, Samuel A.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Mathematics

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (97 pages)

**ABSTRACT:**This dissertation is concerned with the study of how various properties such as malnormality and maximality of surface groups embedded in a 3-manifold group give us information about the topology of a 3-manifold. In this direction we show that the malnormality of certain surface groups is sufficient to detect whether or not there are any Seifert fibered pieces in the JSJ decomposition of a 3-manifold. On the other hand topology itself imposes a strong constraint on what properties a surface group might have. For example, we show that a surface group associated with an essential embedding must be maximal among all surface groups. The first chapter starts with an overview and introduction to the material along with some of the background material needed to understand this dissertation. Here we provide all the appropriate definitions as well as the statements of the theorems and lemmas that are used in this dissertation. All the theorems stated in chapter 1 are standard and well known results in 3-manifold theory and all we have done is provide a brief exposition. We have made an effort to provide appropriate references whenever we could. In the second chapter we study the relationship between malnormal subgroups corre- sponding to incompressible tori and Klein bottles and the absence of Seifert pieces in the JSJ decomposition. In particular, we show that a rank two free abelian subgroup correspond- ing to an embedded incompressible torus in an orientable Haken manifold is a malnormal subgroup if and only if the JSJ piece that contains the torus is non-Seifert. We further gen- eralize this result to any embedded Klein bottle and answer the question of when a maximal abelian subgroup in a Haken manifold group is malnormal. We also explore other conditions that guaranty that there are no Seifert pieces in the JSJ decomposition. Some other results regarding the malnormality of peripheral groups corresponding to higher genus surfaces are also found. The third chapter is concerned with the study of properly embedded incompressible surfaces (closed or otherwise) in a Haken manifold. Here we give a sufficient condition for two embedded surfaces to be isotopic. We show that given two embedded 2-sided incompressible surfaces such that the subgroup associated to one is contained in the subgroup associated to the other, then it must be that case that the surfaces are isotopic. This, in particular, shows that it is impossible to embed two surfaces of different genus in an orientable Haken manifold such that one is a subgroup of the other. In the fourth chapter we generalize the results of the third chapter to immersed π1- injective surfaces. We show that any two immersed surfaces satisfying an analogous condi- tions on their associated subgroups can always be deformed so that one immersed surface is a covering onto the other immersed surface. In particular, this shows that embedded surface groups are maximal among all surface groups.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Mathematics in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 17, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Wolfgang Heil, Professor Directing Dissertation; Horst Wahl, University Representative; Philip Bowers, Committee Member; Samuel Ballas, Committee Member.

**SUBJECT:**Mathematics

**DEGREE:**Doctoral

**Record number: 157**

**FILENAME:**Ren\_fsu\_0071E\_15160.pdf

**TITLE:**Improvement of Quality Prediction in Inter-Connected Manufacturing System by Integrating Multi-Source Data

**AUTHOR:**Ren, Jie

**MEMBER (Professor Directing Dissertation):**Wang, Hui

**MEMBER (Committee Member):**Vanli, Omer Arda

**MEMBER (Committee Member):**Park, Chiwoo

**MEMBER (University Representative):**Huffer, Fred W. (Fred William)

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**FAMU-FSU College of Engineering

**CORPORATE NAME:**Department of Industrial and Manufacturing Engineering

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (99 pages)

**ABSTRACT:**With the development of advanced sensing and network technology such as wireless data transmission and data storage and analytics under cloud platforms, the manufacturing plant is going through a new revolution, by which different production units/components can communicate with each other, leading to inter-connected manufacturing. The interconnection enables the close coordination of process control actions among machines to improve product quality. Traditional quality prediction methods that focus on the data from one single source are not sufficient to deal with the variation modeling, and quality prediction problems involved the inter-connected manufacturing. Instead, new quality prediction methods that can integrate the data from multiple sources are necessary. This research addresses the fundamental challenges in improving quality prediction by data fusion for inter-connected manufacturing including knowledge sharing and transfer among different machines and collaboration error monitoring. The methodology is demonstrated through surface machining and additive manufacturing processes. The first study is on the surface quality prediction for one machining process by fusing multi-resolution spatial data measured from multiple surfaces or different surface machining processes. The surface variation is decomposed into a global trend part that characterizes the spatially varying relationship of selected process variables and surface height and a zero-mean spatial Gaussian process part. Three models including two varying coefficient-based spatial models and an inference rule-based spatial model are proposed and compared. Also, transfer learning technique is used to help train the model via transferring useful information from a data-rich surface to a data-lacking surface, which demonstrates the advantage of inter-connected manufacturing. The second study deals with the surface mating errors caused by the surface variations from two inter-connected surface machining processes. A model aggregating data from two surfaces is proposed to predict the leak areas for surface assembly. By using the measurements of leak areas and the profiles of surfaces mated as training data along with Hagen–Poiseuille law, this study develops a novel diagnostic method to predict potential leak areas (leakage paths). The effectiveness and robustness of the proposed method are verified by an experiment and a simulation study. The approach provides practical guidance for the subsequent assembly process as well as troubleshooting in manufacturing processes. The last study focuses on the learning of quality prediction model in inter-connected additive manufacturing systems, by which different 3D printing processes involved are driven by similar printing mechanisms and can exchange quality data via a network. A quality prediction model that estimates the printing widths along the printing paths for material-extrusion-based additive manufacturing (a.k.a., fused filament fabrication or fused deposition modeling) is established by leveraging the between-printer quality data. The established mathematical model quantifies the printing line-width along the printing paths based on the kinematic parameters, e.g., printing speed and acceleration while considering data from multiple printers that contain between-machines similarity. The method can allow for the between-printer knowledge sharing to improve the quality prediction so that a printing process with limited historical data can quickly learn an effective quality model without intensive re-training, thus improving the system responsiveness to product variety. In the long run, the outcome of this research can help contribute to the development of high-efficient Internet-of-Things manufacturing services for personalized products.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Industrial and Manufacturing Engineering in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 8, 2019.

**NOTE (Keywords):**data fusion, inter-connected manufacturing, quality prediction, spatial model, transfer learning

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Hui Wang, Professor Directing Dissertation; Fred Huﬀer, University Representative; O. Arda Vanli, Committee Member; Chiwoo Park, Committee Member.

**SUBJECT:**Industrial engineering

**SUBJECT:**Statistics

**DEGREE:**Doctoral

**Record number: 158**

**FILENAME:**Richardson\_fsu\_0071N\_15210.pdf

**TITLE:**Trouble in His Brain: Queering William Finn's a New Brain

**AUTHOR:**Richardson, Nicholas Kristofer

**MEMBER (Professor Directing Thesis):**Thomas, Aaron C.

**MEMBER (Committee Member):**Dahl, Mary Karen, 1945-

**MEMBER (Committee Member):**Arespacochaga, Chari

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Fine Arts

**CORPORATE NAME:**School of Theatre

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (112 pages)

**ABSTRACT:**My thesis argues that a critical study of the gay themes and issues in Finn’s work – both obvious and otherwise latent – elucidates historically specific and significant queer texts and subtexts, along with queer modes of reception. Queerness makes meaning of and in Finn’s works; reciprocally, Finn’s works also shape constructions and understandings of queerness in return. My thesis takes on queerness as the central lens through which to read Finn’s 1998 off-Broadway musical A New Brain. I provide queer readings of various aspects of the show; in other words, I queer the musical. In my first chapter (“Stories of Illness”: How AIDS Choreographies Haunt A New Brain), I investigate HIV/AIDS choreographies from both the concert stage (Neil Greenberg’s 1994 Not-About-AIDS-Dance) and the streets (ACT UP’s street protests in the ’80s and ’90s), alongside David Gere’s book How to Make Dances in an Epidemic: Tracking Choreography in the Age of AIDS, to determine patterns in movement vocabularies, aesthetics, definitions, and metaphors for HIV/AIDS-afflicted bodies and narratives. After describing and analyzing these performances, I then read Graciela Daniele’s choreography from the original 1998 off-Broadway production of A New Brain as AIDS choreography. I explain how the music, libretto, and choreography encourage an audience member to view the protagonist’s AVM as a metaphor for AIDS. In my second chapter (“I Should Try to Locate Roger”: Locating the Gay Male in Musical Theatre through Interpellation, Formation, and Simulation), I explain how A New Brain operates in a larger project of defining and shaping the gay male throughout the history of U.S. American musical theatre, specifically in the 1990s. I read D.A. Miller’s essay Place for Us with Louis Althusser’s “Ideology and Ideological State Apparatuses” to illustrate how the Broadway musical hails a gay male subject into being. I include Baudrillard’s “The Precession of Simulacra” to pose that the construction of the gay male exists without a true origin or reference point; instead, the idea of the gay male is formed in a feedback loop between gay men in the real world (offstage) and the gay male characters represented onstage. I include Miller’s examination of three musicals of the 1970s and ’80s to provide a trajectory of gay male representation. Afterwards, I situate A New Brain in context with other gay musicals of the ’90s. From these musicals, I delineate the various narratives Broadway provided for gay male life in the period and compare how these shows represent gay males. My third chapter (“Where the Hell’s My Sense of Humor?”: Camping in the Hospital) argues that in A New Brain, the liminal space created by Gordon’s AVM serves as a productive camp/site for coping with his serious brain injury and questioning societal norms. With Gordon’s rejection of a camp strategy, audiences can drop their earnest responses to Gordon’s crisis and take pleasure instead in the camp aspects of the musical. Despite losing access to the neuroqueer camp/site after emerging from his coma, Gordon still ultimately learns to embrace camp. This lesson extends beyond Gordon; in fact, all of the characters in the musical articulate their newfound camp perspective. Camp creates a community of tangentially related individuals through their shared queer outlook on life. The musical offers this camp approach to its audiences, encouraging them to adopt camp in their own lives outside of the theater. With these approaches outlined above, my thesis provides an angled analysis of Finn’s work from queer perspectives, expanding the existing generalized, queer-averse body of scholarship. My specific focus on A New Brain not only brings attention to a neglected work in Finn’s oeuvre but also illustrates how understanding A New Brain is essential to understanding Finn as a whole. Examining both the original and recent revival productions presents how the reception and meaning of Finn’s work has changed over time. Finn’s musicals also become a case study for larger inquiries into the state of musical theatre and queer politics and histories. Studying A New Brain provides a new brain for thinking about and through William Finn.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the School of Theatre in partial fulfillment of the requirements for the degree of Master of Arts.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 16, 2019.

**NOTE (Keywords):**AIDS, camp, musical theatre, queer, William Finn

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Aaron C. Thomas, Professor Directing Thesis; Mary Karen Dahl, Committee Member; Chari Arespacochaga, Committee Member.

**SUBJECT:**Theater

**SUBJECT:**Performing arts

**DEGREE:**Masters

**Record number: 159**

**FILENAME:**Riggan\_fsu\_0071E\_15000.pdf

**TITLE:**That Which They Write: Qur'Anic Healing and Material Agency in Morocco

**AUTHOR:**Riggan, James

**MEMBER (Professor Directing Dissertation):**Gaiser, Adam R., 1971-

**MEMBER (University Representative):**Luke, Trevor S.

**MEMBER (Committee Member):**Hellweg, Joseph

**MEMBER (Committee Member):**Kelsay, John, 1953-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Religion

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (293 pages)

**ABSTRACT:**Muslims in Morocco and across the globe practice a form of healing and exorcism known as al-ruqya al-shar‘iyya. The primary technique in this system of healing consists of Qur’anic recitation. In order to understand the role of the Qur’an as a healing object, this project examines the history of Qur’anic healing, classification of disease in al-ruqya al-shar‘iyya, the steps of Qur’anic operations, and the development of healing networks. Drawing from ethnographic research conducted primarily in Fez, Morocco, I demonstrate that the Qur’an has material agency. Specifically, the Qur’an acts upon human and social bodies in order to heal them from a series of occult infections. I investigate the role of revelatory speech in Muslim societies and its relationship to individual human bodies. This investigation reveals not only information about how Muslims use the Qur’an in their daily lives, but also information about the relationship between the experience of human illness and a wider social environment. Al-ruqya al-shar‘iyya offers a book as a solution to these trials and tribulations. In the process, however, this system of healing demonstrates that the Qur’an in Muslim societies is a book that transcends both sound and page.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Religion in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 13, 2019.

**NOTE (Keywords):**Al-ruqya Al-shar'iyya, Islam, Morocco, Qur'an

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Adam Gaiser, Professor Directing Dissertation; Trevor Luke, University Representative; Joseph Hellweg, Committee Member; John Kelsay, Committee Member.

**SUBJECT:**Islam and culture

**SUBJECT:**Religion

**DEGREE:**Doctoral

**Record number: 160**

**FILENAME:**Rios\_fsu\_0071E\_14893.pdf

**TITLE:**Understanding Parents' Motivation in a One-Parent, One Language Approach to Bilingual Education

**AUTHOR:**Rios, Angel

**MEMBER (Professor Co-Directing Dissertation):**Southerland, Sherry A., 1962-

**MEMBER (Professor Co-Directing Dissertation):**Boggs, George L.

**MEMBER (University Representative):**Cappuccio, Brenda L.

**MEMBER (Committee Member):**Papi, Mostafa

**MEMBER (Committee Member):**Jakubowski, Elizabeth M.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Education

**CORPORATE NAME:**School of Teacher Education

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2018

**PHYSICAL DESCRIPTION:**1 online resource (99 pages)

**ABSTRACT:**Bilingualism is increasingly gaining popularity in the United States due to the advantages that come with speaking two languages. As a result, parents are becoming more interested in raising bilingual children. One of the many approaches that parents employ to reach this goal is the One Parent One Language or OPOL approach. This approach focuses on natural parent-child interaction where each parent speaks a different language to the child at all times. The present case study consists of an English-Spanish speaking OPOL household, and it qualitatively analyzes the parents’ experience and motivation in teaching their children a second language through the lens of Dornyei's (2009) L2 Motivational Self System. Though this theoretical framework is geared towards the motivational dynamics of the language learner, the present study expands it by moving from a theoretical frame of the learner to a theoretical frame of the parent as the language teacher. Through a series of analyses, observations, and semi-structured interviews, this research gathered data that shows how the ideal L2 self, the ought-to L2 self, and the L2 learning experience are manifested and integrated in the actions of parents in a One Parent One Language household. Results show how each of these components is an L2-specific facet of one’s motivation to learn, or in this case, teach the language, and the data serves to illustrate how Dornyei's (2009) L2 Motivational Self System can inform practice for parents developing strategies to help bilingual children reach maximum levels of eventual language attainment.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the School of Teacher Education in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Fall Semester 2018.

**NOTE (Date of Defense):**November 15, 2018.

**NOTE (Keywords):**Bilingual Education, Bilingualism, L2 Motivational Self System, Motivation, One Parent One Language

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Sherry A. Southerland, Professor Co-Directing Dissertation; George L. Boggs, Professor Co-Directing Dissertation; Brenda Cappuccio, University Representative; Mostafa Papi, Committee Member; Elizabeth M. Jakubowski, Committee Member.

**DEGREE:**Doctoral

**Record number: 161**

**FILENAME:**Rolfe\_fsu\_0071E\_15004.pdf

**TITLE:**Elucidation of the Macrophage Response to Factors Present in the Injured Spinal Cord

**AUTHOR:**Rolfe, Alyssa J. (Alyssa Joy)

**MEMBER (Professor Directing Dissertation):**Ren, Yi

**MEMBER (University Representative):**Fadool, James M.

**MEMBER (Committee Member):**Nowakowski, Richard S.

**MEMBER (Committee Member):**Levenson, Cathy W.

**MEMBER (Committee Member):**Meckes, David G., Jr.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Medicine

**CORPORATE NAME:**Department of Biomedical Sciences

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (185 pages)

**ABSTRACT:**In the United States approximately 17,000 new spinal cord injury cases occur annually. Even with timely medical interventions, the primary injury is often exacerbated by a period of inflammation and pathological vascular changes that result in additional secondary tissue injuries. Moreover, significant cellular death in the injured cord produces cell debris that can contribute to secondary damage if not promptly cleared. Our investigations demonstrate that bone marrow-derived macrophages (BMDMs), but not resident microglia, are the primary phagocytes that clear cell debris from the injured cord. Furthermore, BMDM are retained in the lesion epicenter for protracted periods of time following engulfment of myelin debris. The BMDMs subsequently become myelin laden macrophages which are detrimental to recovery. To study the effects of myelin debris on macrophages, we have developed in vitro methods that allow the quantification of myelin debris phagocytosis and lipid retention. We also identified myelin debris as a potent non-canonical survival factor that can support long-term BMDM survival and prolong their potential to induce damage in vivo. Moreover, we demonstrate for the first time that myelin basic protein (MBP), is sufficient to suppress BMDM apoptosis. To explore both the inflammatory activation and survival of BMDMs we used RNA-sequencing to profile the transcriptome of BMDMs treated with myelin debris and MBP as well as pro-inflammatory (M1) and anti-inflammatory (M2) stimuli. Pathway analysis reveals several key anti-apoptotic genes up-regulated by both myelin debris and MBP. These represent potential therapeutic targets to reduce prolonged macrophage presence in the lesion. We additionally found that myelin debris stimulated macrophages, while functionally pro-inflammatory, have a transcriptional profile that is distinct from classic M1 macrophages. Collectively, these findings expand our understanding of infiltrating BMDMs in SCI, and reveal novel targets for therapeutic manipulation of immune responses to limit secondary injuries and promote recovery.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Biomedical Sciences in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**February 1, 2019.

**NOTE (Keywords):**Bioinformatics, Inflammation, Macrophage, Myelin Basic Protein, Myelin Debris, Spinal Cord Injury

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Yi Ren, Professor Directing Dissertation; James Fadool, University Representative; Richard Nowakowski, Committee Member; Cathy Levenson, Committee Member; David Meckes, Committee Member.

**SUBJECT:**Immunology

**SUBJECT:**Neurosciences

**SUBJECT:**Neurosciences

**SUBJECT:**Bioinformatics

**DEGREE:**Doctoral

**Record number: 162**

**FILENAME:**Ronan\_fsu\_0071N\_15100.pdf

**TITLE:**ADD CORRECTED TITLE: (Have Improvements in Ozone Air Quality Benefited Plants?) Have Improvements in Ozone Air Quality Benefitted Plants?

**AUTHOR:**Ronan, Allison Christine

**MEMBER (Professor Directing Thesis):**Holmes, Christopher D.

**MEMBER (Committee Member):**Wing, Allison A.

**MEMBER (Committee Member):**Bourassa, Mark Allan, 1962-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Earth, Ocean and Atmospheric Science

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (49 pages)

**ABSTRACT:**Surface ozone (O3) is a toxic air pollutant. In the United States and Europe, among other places, policies and technology have reduced emissions of O3 precursors the last couple decades. As a result, peak levels of O3, quantified by concentration metrics such as maximum daily average over 8 hours (MDA8), the accumulated O3 exposure over a threshold of 40 ppb (AOT40), and the weighted cumulative exposure index (W126) have fallen. Influential past studies have assumed that these improvements in AOT40 and W126 imply reductions in plant injury, even though it is widely recognized that O3 flux into leaves is a better predictor of plant damage than ambient concentration in air. Concentration metrics remain widely used because O3 concentration measurements are more common and because concentration and flux are correlated when the variability of stomatal conductance is limited. We use a new dataset of O3 flux into plants to quantify decadal trends in the cumulative uptake of O3 (CUO) into leaf stomata for the first time. We examine 32 sites in the United States and Europe over 2005-2014 and find that the AOT40 and W126 concentration metrics decreased at 25 and 28 sites, respectively, whereas CUO increased at a majority of sites (18). The divergent trends are due to stomatal control of flux, which is shaped by environmental variability. As a result, there has been no widespread, clear improvement in CUO over 2005-2014 at the sites we can assess. We use several statistical tests to show that temporal trends and variability in CUO are uncorrelated with AOT40, W126, and mean concentration (R2 ≤ 0.15). Decreases in concentration metrics, therefore, give a falsely optimistic picture of the direction and magnitude of O3 impacts on vegetation. Because of this lack of relation between flux and concentration, flux metrics should be preferred over concentration metrics in assessments of plant injury from O3. GEOS-Chem is a 3-D global atmospheric chemistry model that uses meteorological input to simulate atmospheric composition. We evaluate the model’s ability to estimate O3 deposition velocity (V\_d) by running a simulation during the same period as the surface O3 trend analysis. By comparing monthly output of V\_d from GEOS-Chem to our observations using the SynFlux dataset, we find that GEOS-Chem consistently underestimates V\_d. The degree of the underestimation depends on the land class type as well as the time of year. We attempt to improve the model output by prescribing the land class type within the model to match the plant functional types at the FLUXNET sites. This did not lead to a significant improvement and in many cases, this led to a wider gap between the model and observations. We discuss possible reasons for the discrepancy between the model and observations. Improving V\_d in the model would better estimate dry deposition of O3, which is important for simulating air quality, and its impacts to humans and plants.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the Department of Earth, Ocean and Atmospheric Science in partial fulfillment of the requirements for the degree of Master of Science.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 3, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Christopher D. Holmes, Professor Directing Thesis; Allison Wing, Committee Member; Mark Bourassa, Committee Member.

**SUBJECT:**Meteorology

**DEGREE:**Masters

**Record number: 163**

**FILENAME:**Rosner\_fsu\_0071E\_15020.pdf

**TITLE:**"It's Especially to Protect Her Because a Woman Is a Tree of Production": Musical Narratives of Female Genital Cutting in Senegal and the Diaspora

**AUTHOR:**Rosner, Elizabeth

**MEMBER (Professor Directing Dissertation):**Gunderson, Frank D.

**MEMBER (University Representative):**Hellweg, Joseph

**MEMBER (Committee Member):**Jackson, Margaret R.

**MEMBER (Committee Member):**Bakan, Michael B.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (214 pages)

**ABSTRACT:**Conversations concerning the highly controversial subject of female genital cutting (FGC) often present women and girls at risk of mutilation caused by unchanging, violent traditions. In this dissertation, I examine the global nature of these conversations and the ways Senegalese women vocalize their position to ultimately establish ethical boundaries through musical narratives. Within this study, I demonstrate the spectrum of worldviews embedded within the songs from both activists and from a community of women who continue to practice. Throughout this conversation, broader themes of ownership, power, and autonomy are revealed; however, the ways these ideas are interpreted and lived vary greatly. My study presents a much-needed dialogue concerning the global discourse on a highly controversial, extremely personal subject with the responses from one community of women in Thionck Essyl, Senegal. By presenting these case studies, I can more fully interrogate the parallels and discontinuities between individual stories left out of the conversation with those who have historically had a platform to be heard in order to complicate the discourse concerning women’s bodies.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the College of Music in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 29, 2019.

**NOTE (Keywords):**Jola, Music and Human Rights, Senegal

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Frank Gunderson, Professor Directing Dissertation; Joseph Hellweg, University Representative; Margaret Jackson, Committee Member; Michael B. Bakan, Committee Member.

**DEGREE:**Doctoral

**Record number: 164**

**FILENAME:**Rowlett\_fsu\_0071E\_14998.pdf

**TITLE:**Snap It Together: Exploring the Role of Snapchat Live Stories in the Collective Identity and Action of Offline Communities

**AUTHOR:**Rowlett, Jerrica Ty

**MEMBER (Professor Co-Directing Dissertation):**Sypher, Ulla

**MEMBER (Professor Co-Directing Dissertation):**Harlow, Summer

**MEMBER (University Representative):**Dennen, Vanessa P., 1970-

**MEMBER (Committee Member):**Jordan-Jackson, Felecia

**MEMBER (Committee Member):**McDowell, Stephen D., 1958-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Communication and Information

**CORPORATE NAME:**School of Communication

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2018

**PHYSICAL DESCRIPTION:**1 online resource (139 pages)

**ABSTRACT:**Social media have altered various aspects of society, including identity management, collective action, and civic engagement. One of the more recent social media to enter the scene is Snapchat, an application that allows users to create snaps (photos or short videos) to share with others. Snapchat has several features that make it unique, yet this research focuses on the Snapchat Map and Snapchat Live Stories feature of the application. These features allow members of a physical offline community to share snaps to the map, generating a content that anyone in the world can view. This research explores this feature of Snapchat, bringing into question the community building potential and identity management strategies of the platform, particularly in instances of civic engagement. This mixed-methods research utilized qualitative textual and visual analyses of Snapchat Live Stories, as well as quantitative content analysis of the data. Additionally, a survey was distributed it 495 active Snapchat users to learn about their experiences with the app. Findings show that Snapchat has the affordances necessary to create a sense of community among individuals, but it seems that most users are not interacting with these application features, bringing into question the usability of the applications. Findings also suggest that the affordances of Snapchat do not easily permit collective action among members of a community or increase perceived political self-efficacy. The application can provide a more wholistic view of a community, giving insider-perspective through camera angles that allow the viewer to feel as if they are present.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the School of Communication in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Fall Semester 2018.

**NOTE (Date of Defense):**December 13, 2018.

**NOTE (Keywords):**Civic Engagment, Collective Action, Collective Identity, Snapchat, Social Media

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Ulla Sypher, Professor Co-Directing Dissertation; Summer Harlow, Professor Co-Directing Dissertation; Vanessa Dennen, University Representative; Felecia Jordan-Jackson, Committee Member; Stephen McDowell, Committee Member.

**SUBJECT:**Communication

**DEGREE:**Doctoral

**Record number: 165**

**FILENAME:**Ryasnianskiy\_fsu\_0071N\_15232.pdf

**TITLE:**Machine Learning Approach for Generalizing Traffic Pattern-Based Adaptive Routing in Dragonfly Networks

**AUTHOR:**Ryasnianskiy, Yevgeniy

**MEMBER (Professor Co-Directing Thesis):**Yuan, Xin, Ph. D

**MEMBER (Professor Co-Directing Thesis):**Liu, Xiuwen, -1966

**MEMBER (Committee Member):**Kumar, Piyush

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Computer Science

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (37 pages)

**ABSTRACT:**Universal Global Adaptive routing (UGAL) is a common routing scheme used in systems based on the Dragonfly interconnect topology. UGAL uses information about local link-loads to make adaptive routing decisions. Traffic Pattern-based Adaptive Routing (TPR) enhances UGAL by incorporating additional network statistics into the routing process. Contemporary switches are designed to accommodate an expansive set of network performance metrics. Distinguishing between significant, predictive metrics and insignificant metrics is critical to the process of designing an adaptive routing algorithm. We propose the use of recurrent neural networks to assess the relative predictive power of various network statistics. Using this method we rank the predictive power of network statistics using data collected from a network simulator. Both UGAL and TPR require tuning of hyper-parameters to achieve optimal performance, with TPR having more than 20 parameters for the Cray Cascade architecture. We demonstrate that the optimal value of these parameters can vary significantly based on the size of the architecture, the arrangement of global links chosen for the Dragonfly topology, and the traffic that the system will likely encounter. We propose and evaluate using a neural network to simplify the tuning of hyper-parameters used in TPR. We find that this approach is able to match or exceed the performance of TPR across several synthetic traffic patterns using a network simulator.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the Department of Computer Science in partial fulfillment of the requirements for the degree of Master of Science.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 22, 2019.

**NOTE (Keywords):**adaptive routing, adaptive systems, dragonfly network, machine learning, network topology, routing

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Xin Yuan, Professor Co-Directing Thesis; Xiuwen Liu, Professor Co-Directing Thesis; Piyush Kumar, Committee Member.

**SUBJECT:**Computer science

**DEGREE:**Masters

**Record number: 166**

**FILENAME:**SALEHY\_fsu\_0071E\_15151.pdf

**TITLE:**Belief Function Theory: Monte Carlo Methods and Application to Stock Markets

**AUTHOR:**Salehy, Seyyed Nima

**MEMBER (Professor Directing Dissertation):**Ökten, Giray

**MEMBER (University Representative):**Srivastava, Anuj, 1968-

**MEMBER (Committee Member):**Cogan, Nicholas G.

**MEMBER (Committee Member):**Fahim, Arash

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Mathematics

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (93 pages)

**ABSTRACT:**Belief function theory, also known as Dempster-Shafer theory or evidence theory, gives a general framework for quantifying, representing, and managing uncertainty, and it is widely used in several applications from artificial intelligence to accounting. The belief function theory provides tools to combine several sources' opinions (belief functions), among which, Dempster's rule of combination is the most commonly used. The main drawback of using Dempster's rule to combine belief functions is its computational complexity, which limits the application of Dempster's rule to small number of belief functions. We introduce a family of new Monte Carlo and quasi-Monte Carlo algorithms aimed at approximating Dempster's rule of combination. Then, we present numerical results to show the superiority of the new methods over the existing ones. The algorithms are then used to implement some stock investment strategies based on Dempster-Shafer theory. We will introduce a new strategy, and apply it to the U.S. stock market over a certain period of time. Numerical results suggest the strategies based on the belief function theory outperform the S&P 500 index, with our new strategy giving the best returns.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Mathematics in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 19, 2019.

**NOTE (Keywords):**belief function theory, Dempster-Shafer theory, Dempster's rule of combination, financial mathematics, Monte Carlo methods, quasi-Monte Carlo methods

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Giray Okten, Professor Directing Dissertation; Anuj Srivastava, University Representative; Nick Cogan, Committee Member; Arash Fahim, Committee Member.

**SUBJECT:**Mathematics

**DEGREE:**Doctoral

**Record number: 167**

**FILENAME:**Salehy\_fsu\_0071E\_15152.pdf

**TITLE:**Random Walks over Point Processes and Their Application in Finance

**AUTHOR:**Salehy, Seyyed Navid

**MEMBER (Professor Directing Dissertation):**Kercheval, Alec N.

**MEMBER (Committee Member):**Ewald, Brian

**MEMBER (Committee Member):**Fahim, Arash

**MEMBER (Committee Member):**Ökten, Giray

**MEMBER (University Representative):**Huffer, Fred W. (Fred William)

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Mathematics

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (85 pages)

**ABSTRACT:**In continuous-time models in finance, it is common to assume that prices follow a {\em geometric Brownian motion}. More precisely, it is assumed that the price at time $t \geq 0$ is given by $$Z\_t = Z\_0 \exp \big{(} \sigma \mathcal{B}\_t + mt \big{)},$$ where $Z\_0$ is the initial price, $\mathcal{B}$ is standard Brownian motion, $\sigma$ is the volatility, and $m$ is the drift. We discuss how $Z$ can be viewed as the limit of a sequence of discrete price models based on random walks. We note that in the usual random walks, jumps can only happen at {\em deterministic} times. We first construct a natural simple model for price by considering a random walk in which jumps can happen at {\em random times} following a counting process $N$. We then develop a sequence of discrete price models using random walks over point processes. The limit process gives the new price model: $$Z\_t = Z\_0 \exp \big{(} \sigma \mathcal{B}\_{\Lambda\_t} + m \Lambda\_t \big{)},$$ where $\Lambda$ is the compensator for the counting process $N$. We note that if $N$ is a Poisson process with intensity $1$, then this model coincides with the geometric Brownian motion model for the price. But this new model provides more flexibility as we can choose $N$ to be many other well-known counting processes. This includes not only homogeneous and inhomogeneous Poisson processes which have deterministic compensators but also Hawkes processes which have stochastic compensators. We also discuss and prove many properties for the process $\mathcal{B}\_{\Lambda}$. For example, we show that $\mathcal{B}\_{\Lambda}$ is a continuous square integrable martingale. Moreover, we discuss when $\mathcal{B}\_{\Lambda}$ has uncorrelated increments and when it has independent increments. Moreover, we investigate how the Black-Scholes pricing formula will change if the price of the risky asset follows this new model when $N$ is an inhomogeneous Poisson process. We show that the usual Black-Scholes formula is obtained when the counting process $N$ is a Poisson process with intensity $1$.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Mathematics in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 16, 2019.

**NOTE (Keywords):**Black-Scholes model, financial mathematics, point process, Poisson and Hawkes processes, random walk, time-changed Brownian motion

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Alec Kercheval, Professor Directing Dissertation; Fred Huﬀer, University Representative; Brian Ewald, Committee Member; Arash Fahim, Committee Member; Giray Okten, Committee Member.

**SUBJECT:**Mathematics

**SUBJECT:**Statistics

**DEGREE:**Doctoral

**Record number: 168**

**FILENAME:**Schellinger\_fsu\_0071E\_14874.pdf

**TITLE:**Complexities of Integrating Science and Engineering in Elementary School Science

**AUTHOR:**Schellinger, Jennifer

**MEMBER (Professor Co-Directing Dissertation):**Southerland, Sherry A., 1962-

**MEMBER (Professor Co-Directing Dissertation):**Jaber, Lama

**MEMBER (University Representative):**Winn, Alice A.

**MEMBER (Committee Member):**Boggs, George L.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Education

**CORPORATE NAME:**School of Teacher Education

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2018

**PHYSICAL DESCRIPTION:**1 online resource (113 pages)

**ABSTRACT:**The Next Generation Science Standards present an integrated approach to science and engineering education in which science is foundational to engineering and engineering contextualizes and reinforces science ideas. The research presented here explores how one elementary school teacher and her students came to understand what is expected of them when asked to engage in an integrated science and engineering unit on simple circuits. Analysis of whole class and small group video transcripts and artifacts revealed that an integrated approach may be more problematic that promising for teachers and students. We discuss these findings and what they might mean when engineering is seen as an avenue for applying science knowledge in classrooms.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the School of Teacher Education in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Fall Semester 2018.

**NOTE (Date of Defense):**December 13, 2018.

**NOTE (Keywords):**Elementary Science Education, Integration of Science and Engineering, Science Education

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Sherry A. Southerland, Professor Co-Directing Dissertation; Lama Z. Jaber, Professor Co-Directing Dissertation; Alice Winn, University Representative; George Boggs, Committee Member.

**SUBJECT:**Science--Study and teaching

**DEGREE:**Doctoral

**Record number: 169**

**FILENAME:**Schneider\_fsu\_0071N\_15236.pdf

**TITLE:**The Influence of Disturbing Dreams on One's Acquired Capability for Suicide

**AUTHOR:**Schneider, Matthew

**MEMBER (Professor Directing Thesis):**Joiner, Thomas, Jr.

**MEMBER (Committee Member):**Cougle, Jesse R. (Jesse Ray), 1975-

**MEMBER (Committee Member):**Ganley, Colleen M.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Psychology

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (64 pages)

**ABSTRACT:**Background: Prior studies have shown a strong association between disturbing dreams and suicidal ideation and behaviors, but the pathways connecting them have not been well characterized. The systemic desensitization theory of dreams would suggest that the acquired capability for suicide, specifically the fearlessness about death component, could further explain these pathways. Hypothesis: More intense suicidal ideation will lead to more severe suicidal behaviors through a three-step mediation of more severe nightmares and greater acquired capability for suicide. However only for those with lower levels of anxiety sensitivity will the more severe nightmares lead to greater acquired capability for suicide and suicidal behaviors. Methods: Mediation and moderation regression analysis were completed through secondary analysis of data for two studies, and primary data collection and analysis was done through a third study. 647 participants filled out self-report questionnaires as part of intake data at a southeastern university’s psychology clinic for the first study (mean age 27.4, 62.1% female). 1143 participants from various branches of the military filled out the self-report questionnaires as part of the Military Suicide Research Consortium for the second study (mean age 29.34, 16.6% female). 251 participants were recruited through Amazon MTurk and filled out the self-report questionnaires (mean age 34.0, 38.6% female). Mediation and moderation regression analysis were then completed for a third online study, which tested additional mediators and moderators. Results: The hypotheses were partially supported across the various studies. Within the sample collected for the sake of this project, the effects were the strongest. There was evidence that dreams involving death specifically were related to higher fearlessness about death from suicide, although not higher fearlessness about death more generally. Ruminative thinking patterns moderated this interaction, such that less rumination strengthened the relationship between dreams about death and fearlessness about death from suicide. Limitations: Limitations include the inability to detect causality due to a cross-sectional design, as well as the lack of generalizability to older or suicidal samples. Conclusions: These findings further explain the pathways linking disturbing dreams to suicidal ideation through adding in fearlessness about death and acquired capability with rehearsal for suicide as mediators. They also establish the moderating role of ruminative thinking as an explanatory mechanism between dreams and fearlessness about death.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the Department of Psychology in partial fulfillment of the requirements for the degree of Master of Science.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 1, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Thomas E. Joiner, Professor Directing Thesis; Jesse R. Cougle, Committee Member; Colleen M. Ganley, Committee Member.

**SUBJECT:**Clinical psychology

**DEGREE:**Masters

**Record number: 170**

**FILENAME:**Schoenberger\_fsu\_0071E\_14981.pdf

**TITLE:**Who Am I? : the LGBTQ+ Student Experience during Study Abroad

**AUTHOR:**Schoenberger, Lauren Keely

**MEMBER (Professor Directing Dissertation):**Khurshid, Ayesha, 1971-

**MEMBER (University Representative):**McDowell, Stephen D., 1958-

**MEMBER (Committee Member):**Schwartz, Robert A.

**MEMBER (Committee Member):**Zuilkowski, Stephanie Simmons

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Education

**CORPORATE NAME:**Department of Educational Leadership and Policy Studies

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (105 pages)

**ABSTRACT:**Who Am I? The LGBTQ+ Student Experience during Study Abroad This dissertation takes an in-depth look at the unique experiences of five Florida State University study abroad alumni who self-identified as lesbian, gay, bisexual, transgender or queer after their experiences overseas. The purpose of this research was to understand if study abroad played a role in participants’ sexual identity formation. To examine participants’ lived experiences, this research used a qualitative life history approach. Data were collected through in-depth interviews. Results revealed two prominent themes: first, participants grew up feeling loved but not accepted; and second, study abroad provided an environment for students to “reinvent” themselves. Overall, this research illustrates that complex, emotional experiences such as studying in a foreign country can lead to a heightened awareness about one’s identity and sexual orientation. This study has implications for study abroad faculty and staff who may be exposed to students questioning their sexual orientation. Keywords: lesbian, gay, bisexual, transgender and queer, sexual identity development, study abroad experience

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Educational Leadership and Policy Studies in partial fulfillment of the requirements for the degree of Doctor of Education.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**January 30, 2019.

**NOTE (Keywords):**LGBTQ+, Sexual Identity Development, Study Abroad

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Ayesha Khurshid, Professor Directing Dissertation; Steve McDowell, University Representative; Robert A. Schwartz, Committee Member; Stephanie Zuilkowski, Committee Member.

**SUBJECT:**Education, Higher

**DEGREE:**Doctoral

**Record number: 171**

**FILENAME:**Selkirk\_fsu\_0071E\_15064.pdf

**TITLE:**The Influences of Stylistic and Programmatic Elements in Selected Works by Alyssa Morris

**AUTHOR:**Selkirk, Amy M.

**MEMBER (Professor Directing Treatise):**Ohlsson, Eric Paul, 1952-

**MEMBER (University Representative):**Clary, Richard

**MEMBER (Committee Member):**Amsler, Eva

**MEMBER (Committee Member):**Keesecker, Jeff

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (43 pages)

**ABSTRACT:**This treatise discusses and exemplifies the stylistic and programmatic elements in three works by award-winning American oboist and composer, Alyssa Morris (b. 1984): Four Personalities for oboe and piano; Up and Away: The Story of a Balloon for oboe, bassoon, and piano; and Chrysalis for English horn and piano. Beginning with her first published work in 2007, Four Personalities, Morris’s music has become very popular. Several of her works have been recorded by prominent oboists and have been performed at conferences of the International Double Reed Society. The document provides biographical information on the composer and gives a detailed description of her compositional style and influences. This is followed by a thorough analysis of the form of each movement, and a discussion of the stylistic and programmatic elements utilized in each of these three works. The purpose of this research is to highlight the accomplishments of a composer who has made a significant contribution to woodwind music in the 21st Century, as well as to identify which qualities and compositional techniques allow her works to stand out in the wide selection of music written during this time period.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Treatise submitted to the College of Music in partial fulfillment of the requirements for the degree of Doctor of Music.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 1, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Eric Ohlsson, Professor Directing Treatise; Richard Clary, University Representative; Eva Amsler, Committee Member; Jeffrey Keesecker, Committee Member.

**SUBJECT:**Music

**DEGREE:**Doctoral

**Record number: 172**

**FILENAME:**Shelfer\_fsu\_0071N\_15012.pdf

**TITLE:**Humicrete in Northwest Florida an Analysis of Formation and Characteristics

**AUTHOR:**Shelfer, Megan L. (Megan Lee)

**MEMBER (Professor Directing Thesis):**Kish, Stephen A.

**MEMBER (Committee Member):**Ray, Peter

**MEMBER (Committee Member):**Wang, Yanchang

**MEMBER (Committee Member):**Means, Guy H.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Earth, Ocean and Atmospheric Science

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (64 pages)

**ABSTRACT:**The formation process by which sand becomes cemented with humate compounds to form humicrete is not well understood, likely due in part to limited exposures of this material around the world. Humicrete layers along the Intracoastal Waterway in northwest Florida are some of the most well exposed units in the western hemisphere. Over a length of about ten kilometers, multiple beds with varying humate cementation can be observed throughout the lower two-thirds of bluffs that are nine to fifteen meters high. Dune deposits overlay the humicrete layers. The most prominent humicrete layer is approximately one to two meters thick and can be traced nearly continuously for over a kilometer. These layers were catalogued, photographed, and sampled for this study, in an effort to learn more about their depositional conditions, chemical composition, and the age of the material hosting the humate cementation. Specifically, this project sought to understand whether the organic matter present in the humate layers was transported laterally from nearby areas with high organic accumulation, or leached from overlying peat layers. Samples of disaggregated humate were analyzed via Fourier Transform Infrared (FTIR) spectroscopy and carbon/nitrogen isotopic analysis. The FTIR data produced indicated high concentrations of lignins and hydroxyls, similar to the chemical signature of younger humicrete samples. A table of the individual FTIR data points is included as a supplementary file titled “Appendix B - FTIR.pdf.” Isotopic analysis of these samples yielded δ13C values of -23.6‰ to -26.8‰ and a C/N ratio of 62 to 85, both of which point to terrestrial plants as the originating vegetation. Results of these tests, as well as observation of the current environment along the northwest Florida coastline, suggest that the organic matter found in these humicrete layers was carried laterally by near-surface groundwater from nearby forested swamps. The age of these host layers and the humicrete cementation is believed to be around 115,000-130,000 years old, as they are thought to have formed by interaction with groundwater during the Sangamonian interglacial period. Additional testing, especially with regard to extent, age and nature of movement of organic-rich water, would be helpful in further understanding how humicrete forms.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the Department of Earth, Ocean and Atmospheric Science in partial fulfillment of the requirements for the degree of Master of Science.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 8, 2019.

**NOTE (Keywords):**FTIR, humate, humicrete

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Stephen Kish, Professor Directing Thesis; Peter Ray, Committee Member; Yang Wang, Committee Member; Guy Means, Committee Member.

**SUBJECT:**Geology

**DEGREE:**Masters

**Record number: 173**

**FILENAME:**Shields\_fsu\_0071N\_15097.pdf

**TITLE:**Interannual Variability of Tropical Cyclone Potential Intensity and Lifetime Maximum Intensity: An Analysis of Influential Factors

**AUTHOR:**Shields, Shannon Rose

**MEMBER (Professor Directing Thesis):**Wing, Allison A.

**MEMBER (Committee Member):**Hart, Robert E. (Robert Edward), 1972-

**MEMBER (Committee Member):**Sura, Philip

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Earth, Ocean and Atmospheric Science

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (101 pages)

**ABSTRACT:**Many tropical cyclone studies have been conducted on basin-averaged potential intensity trends and the influence of sea surface temperatures (SSTs) on tropical cyclone intensity, but there is less research on along-track potential intensity (PI) and lifetime maximum intensity (referred to here as actual intensity or AI) and the factors that influence their variability. Potential intensity is a theory that predicts the maximum intensity that a tropical cyclone can achieve given certain large-scale environmental variables. Understanding interannual variability in PI and its relation to AI interannual variability is of great importance for assessing the impact of future climate conditions on tropical cyclones. Theoretically, warmer SSTs and cooler outflow temperatures would cause an increase in overall PI which in turn would lead to an increase in AI. This thesis examined the relationship between PI and AI on interannual time scales and the factors affecting PI variability: thermodynamic efficiency and air-sea enthalpy disequilibrium. Using best-track data and three reanalysis products, variability in PI and AI was examined for the North Atlantic, North Indian, South Indian, South Pacific, Eastern North Pacific, and Western North Pacific basins from 1980-2013. Overall, the Western North Pacific was the only basin that yielded high and consistently significant correlations between AI and PI. Despite the expectation from a previous study, the North Atlantic did not yield robust significant correlations. Multiple tests were then conducted to determine the sensitivity of the North Atlantic correlations to different datasets and time periods. Ultimately, it was determined that the North Atlantic AI vs. PI correlation results were very dependent upon the time period and the individual years within the time period. In the comparison of all contributors, air-sea disequilibrium was the dominant contributor to PI variability. When AI variability was correlated with PI variability, disequilibrium (which is largely controlled by SSTs) was also the dominant contributor to AI variability. Although disequilibrium was the dominant factor in PI and AI interannual variability, efficiency also played a role. In fact, this study found that variances in efficiency explained 13-93% of PI interannual variability, indicating that variability in outflow temperatures (which cause much of the variability in efficiency) must be taken into account.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the Department of Earth, Ocean and Atmospheric Science in partial fulfillment of the requirements for the degree of Master of Science.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 2, 2019.

**NOTE (Keywords):**actual intensity, disequilibrium, efficiency, interannual variability, lifetime maximum intensity, potential intensity

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Allison Wing, Professor Directing Thesis; Robert Hart, Committee Member; Philip Sura, Committee Member.

**SUBJECT:**Meteorology

**DEGREE:**Masters

**Record number: 174**

**FILENAME:**Shropshire\_fsu\_0071N\_15238.pdf

**TITLE:**Quantifying Spatiotemporal Variability in Zooplankton Dynamics in the Gulf of Mexico Using a Physical-Biogeochemical Model

**AUTHOR:**Shropshire, Taylor A. (Taylor Adam)

**MEMBER (Professor Co-Directing Thesis):**Stukel, Michael R

**MEMBER (Professor Co-Directing Thesis):**Chassignet, Eric P.

**MEMBER (Committee Member):**Morey, Steven L.

**MEMBER (Committee Member):**Kranz, Sven Alexander

**MEMBER (Committee Member):**Cogan, Nicholas G.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Earth, Ocean and Atmospheric Science

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (54 pages)

**ABSTRACT:**Zooplankton play an important role in global biogeochemistry and their secondary production supports valuable fisheries of the world’s oceans. Coupled physical-biogeochemical models (PBMs) provide a unique oceanographic research tool for studying zooplankton on basin and global scales since zooplankton cannot currently be estimated using remote sensing techniques. However, evaluating the accuracy of zooplankton abundance estimates from PBMs has been a major challenge as a result of sparse ship-based observations. Consequently, zooplankton dynamics have been under studied and under validated in PBMs. In this study, we configure a PBM for the Gulf of Mexico (GoM) and validate simulated zooplankton fields against an extensive combination of in situ biomass and rate measurements. We find that spatial variability in mesozooplankton biomass observed in a multi-decadal database for the northern GoM is well resolved by the model with a statistically significant (p < 0.05) correlation of 0.74. In terms of community composition, the model estimates that large zooplankton (LZ) and predatory zooplankton (PZ) functional groups makes up approximately 40% and 60% of the simulated mesozooplankton biomass respectively, which is further supported by ship-based measurements. Once validated the model was used to investigate mesozooplankton diet and secondary production. Model results of LZ dietary composition suggests that herbivory is the dominant feeding pathway whereas PZ dietary composition is largely carnivorous. Dietary composition is found to be less binary in the oligotrophic GoM where LZ and PZ feed on a combination of phytoplankton and zooplankton. We discuss how already low mesozooplankton biomass in the oligotrophic Gulf (~0.04 mmol N m-3) may become further reduced in the future with important impacts on food availability for higher planktivorous trophic levels such as pelagic larval fish. Such reductions could be expected from increases in thermal stratification as a result of a warming ocean and ensuing increases in bottom-up ecosystem limitation.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the Department of Earth, Ocean and Atmospheric Science in partial fulfillment of the requirements for the degree of Master of Science.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 17, 2019.

**NOTE (Keywords):**bio-physical model, Gulf of Mexico, larval fish, offline modeling, physical-biogeochemical model, zooplankton

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Michael Stukel, Professor Co-Directing Thesis; Eric Chassignet, Professor Co-Directing Thesis; Steven Morey, Committee Member; Sven Kranz, Committee Member; Nicholas Cogan, Committee Member.

**SUBJECT:**Marine biology

**DEGREE:**Masters

**Record number: 175**

**FILENAME:**Simmons\_fsu\_0071E\_13940.pdf

**TITLE:**Magnetic Ordering and Magnetotransport at Molecular and Nano Scales

**AUTHOR:**Simmons, Danielle Theresa

**MEMBER (Professor Directing Dissertation):**Xiong, Peng

**MEMBER (University Representative):**Shatruk, Mykhailo

**MEMBER (Committee Member):**Bonesteel, N. E.

**MEMBER (Committee Member):**Baumbach, Ryan E.

**MEMBER (Committee Member):**Piekarewicz, Jorge

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Physics

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (100 pages)

**ABSTRACT:**The understanding of magnetic materials has become crucial to both fundamental physics and technological advancement. Particularly, the interplay between magnetic and electronic properties has given rise to such novel physics as high temperature superconductivity and colossal magnetoresistance. Some magnetic materials potentially hold the key to the realization of new nanoscale memory and logic devices. Specifically, spintronics and molecular electronics are two fields drawing increasing attention due to their potential to address the ever-increasing need for continued device miniaturization. This dissertation focuses on probing magnetic ordering and magnetotransport at molecular and nano scales utilizing electronic measurement techniques in order to gain further understanding of these complex phenomena. The first project of this dissertation deals with the effect of electronic phase separation (EPS), which is believed to be at the root of several emergent correlated electron phenomena. The goal of this research is to gain further insight into the complex interplay between the magnetic and electronic interactions in the ferromagnetic semimetal EuB6 under applied hydrostatic pressure. Previous studies under ambient pressure have uncovered a remarkable manifestation of EPS in the nonlinear Hall effect of EuB6. The magnetotransport measurements under pressure that we performed revealed an increase in carrier concentration as well as an increase in the critical magnetization needed to instigate the percolation of the phase-separated ferromagnetic entities (magnetic polarons). Also discovered by these measurements was an intermediate state between the paramagnetic insulating phase and the ferromagnetic metallic phase, thereby indicating that the electronic phase separation is even more complicated than previously predicted. Previous work had shown a lattice constriction concomitant with the formation and percolation of magnetic polarons, suggesting that magnetostriction might provide a direct probe of their formation. These results inspired us to measure the magnetostriction of EuB6 under applied pressure in the phase-separated regions. Not only did our measurements show a reduction in the constriction necessary for polaron formation, but also showed lattice expansion above and below the polaron formation temperatures. While hybrid organic-electronic devices hold much promise in a variety of applications, there are several hurdles to overcome before they can be fully integrated. One such family of materials, known as spin-crossover molecules, have high-spin and low-spin states that can be activated thermally and/or through photo excitation. Since each molecule has an independent spin state, devices built from these materials would not rely on long-range magnetic order. Additionally, advancements in molecular nano-patterning and self-assembly make these molecules attractive for bottom-up device integration. On the other hand, the tiny magnetic signals from the change of spin state of a small volume of molecules necessitate more sensitive devices for measuring nano patterns of monolayers of the molecules. In the second project of the dissertation, we demonstrate the feasibility of magnetic measurements of monolayers of spin-crossover molecules. Using a high-sensitivity Hall magnetometry technique, we showed measurements of the light induced excited spin state trapping effect in Fe(ptz)6(BF4)2. These experiments provide clear guidelines for improving the magnetic moment sensitivity by using semiconductor heterostructures free of photoconductivity.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Physics in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**January 29, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Peng Xiong, Professor Directing Dissertation; Michael Shatruk, University Representative; Nicholas Bonesteel, Committee Member; Ryan Baumbach, Committee Member; Jorge Piekarewicz, Committee Member.

**SUBJECT:**Physics

**SUBJECT:**Condensed matter

**DEGREE:**Doctoral

**Record number: 176**

**FILENAME:**Sinisi\_fsu\_0071N\_14954.pdf

**TITLE:**Stuck in Traffic: The Wehrmacht's Failure in Urban Russia

**AUTHOR:**Sinisi, Scott T.

**MEMBER (Professor Directing Thesis):**Grant, Jonathan A., 1963-

**MEMBER (Committee Member):**Williamson, George S.

**MEMBER (Committee Member):**Creswell, Michael, 1958-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of History

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2018

**PHYSICAL DESCRIPTION:**1 online resource (88 pages)

**ABSTRACT:**This paper traces an emergent pattern of critical delays imposed on the German method of warfare known as blitzkrieg by forced engagement in urban combat throughout the campaigns in Poland, France and the Low Countries, and finally the Soviet Union.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the Department of History in partial fulfillment of the requirements for the degree of Master of Arts.

**NOTE (Degree Awarded):**Fall Semester 2018.

**NOTE (Date of Defense):**November 19, 2018.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Jonathan A. Grant, Professor Directing Thesis; George Williamson, Committee Member; Michael Creswell, Committee Member.

**DEGREE:**Masters

**Record number: 177**

**FILENAME:**Sonavane\_fsu\_0071N\_14941.pdf

**TITLE:**Optimization of Energy Transfer during Active Balancing of Lithium-Ion Batteries

**AUTHOR:**Sonavane, Rohit Ganesh

**MEMBER (Professor Directing Thesis):**Moss, Pedro L.

**MEMBER (Committee Member):**Weatherspoon, Mark H.

**MEMBER (Committee Member):**Foo, Simon Y.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**FAMU-FSU College of Engineering

**CORPORATE NAME:**Department of Electrical and Computer Engineering

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (75 pages)

**ABSTRACT:**Balancing is one of the most important function of any battery management system (BMS). We need it to adjust all the batteries in the system for them to work efficiently, based on battery voltage or state-of-charge (SOC). One of the most common and easier ways to achieve cell balancing is by using active or passive cell balancing techniques. Active balancing is when you equalize a battery or a cell with another battery with higher potential. Active balancing is widely implemented method as it is cheap, but it is not as optimum and efficient as compared to the new methods like pulse charging. In this proposed study, we have a dynamic topology for active balancing method that would give us optimized results, with faster balancing and an expandable system for ‘n’ number of batteries or cells. We have reduced the charge and discharge time, removing the delays that many existing systems faces. We achieved it in both simulations and experimental testing. It also, enables in improved charging that does not allow the stack to fail. The use of microcontrollers has proved to reduce the switching time and optimize the results. These switches are precisely controlled hence saving the amount of time needed in charge and discharge cycles. This topology uses an inductor, which is the main component for charge transfer. When charge is transferred from one battery to the other we use inductor as the medium. This inductor basically stores the charge in the first cycle and then dumps it onto the battery in the second cycle. This topology also includes an external charger that keeps charging the stack while equalization takes place. This improves the charging and balancing time for the entire stack.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the Department of Electrical and Computer Engineering in partial fulfillment of the requirements for the degree of Master of Science.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 4, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Pedro L. Moss, Professor Directing Thesis; Mark H. Weatherspoon, Committee Member; Simon Foo, Committee Member.

**SUBJECT:**Engineering

**DEGREE:**Masters

**Record number: 178**

**FILENAME:**Song\_fsu\_0071N\_15201.pdf

**TITLE:**Crystalline Properties of Poly(ethylene brassylate)

**AUTHOR:**Song, Daokun

**MEMBER (Professor Directing Thesis):**Alamo, Rufina G.

**MEMBER (Committee Member):**Chung, Hoyong

**MEMBER (Committee Member):**Guan, Jingjiao

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**FAMU-FSU College of Engineering

**CORPORATE NAME:**Department of Chemical and Biomedical Engineering

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (101 pages)

**ABSTRACT:**Poly (ethylene tridecanedioate), also known as poly(ethylene brassylate) (PEB), is a long-spaced aliphatic polyester obtained from a renewable source. PEB in a range of molar mass between 27,000 and 188,000 Dalton crystallize rapidly as single peaks at ~55ºC and display three major melting peaks (60 -70ºC). The original crystals melt at ~58°C and further recrystallize and melt again at ~70°C while a different type of crystal forms at the same time and melts at ~65°C. The difference between the various types of crystals formed in PEB is the number of repeating units in the crystal. Differences in the crystal thickness lead to the effect of self-poisoning at the growth front, and hence, to a deep depression in the temperature coefficient of the growth rate at temperatures approaching the melting temperature of the thin crystals from above. This minimum of the rate, first described for n-alkanes, is also observed in the overall crystallization kinetics obtained by DSC, and follows a general behavior of precision polyethylenes that develop different crystalline structures by changing undercooling.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Thesis submitted to the Department of Chemical and Biomedical Engineering in partial fulfillment of the requirements for the degree of Master of Science.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 15, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Rufina G. Alamo, Professor Directing Thesis; Hoyong Chung, Committee Member; Jingjiao Guan, Committee Member.

**SUBJECT:**Chemical engineering

**DEGREE:**Masters

**Record number: 179**

**FILENAME:**Sorenson\_fsu\_0071N\_15216.pdf

**TITLE:**First Year Florida Music Educator Experiences with District Sponsored Mentoring Programs

**AUTHOR:**Sorenson, Rachel Anne

**MEMBER (Professor Directing Thesis):**Kelly, Steven N.

**MEMBER (Committee Member):**Fredrickson, William E.

**MEMBER (Committee Member):**VanWeelden, Kimberly D.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (75 pages)

**ABSTRACT:**The purpose of this study was to examine the prevalence and perceived effectiveness of mentoring for first year music teachers in the state of Florida. Specifically, the researcher sought to discover what percentage of new music teachers were assigned mentors through their schools or counties, whether or not these mentors were like-content, and how these teachers rated both the support received and overall efficacy of these mentors. Participants (N = 28) were first year music teachers in the state of Florida for the 2018-2019 school year who were asked to complete an online survey created by the researcher. Participants were asked whether or not they had been assigned a mentor through their school or county and were then asked a series of questions designed to describe the nature of their mentor-mentee relationships. At the end of the survey, participants were asked to respond to two open-ended questions regarding the most positive and negative aspects of their relationships with their mentors. Results from the surveys showed that roughly 80% of participants had been assigned a mentor by either their school or county, and of the group who had been assigned a mentor, roughly 64% had mentors who were also music teachers. Teachers in the current study rated their mentors highly with regard to perceptions of support received, with the exception of teachers with non like-content mentors, who rated some issues related to support and efficacy significantly lower. Similarly, the teachers in this study without like-content mentors rated the overall effectiveness of their mentors significantly lower than teachers with like-content mentors. Overall, teachers indicated that they viewed their mentors as sources of experience whom they could turn to for advice on many topics, but wished that in general they had more interaction time with their mentors.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the College of Music in partial fulfillment of the requirements for the degree of Master of Music Education.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 8, 2019.

**NOTE (Keywords):**Induction, Mentoring, Music educator

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Steven N. Kelly, Professor Directing Thesis; William Fredrickson, Committee Member; Kimberly Van Weelden, Committee Member.

**SUBJECT:**Music--Instruction and study

**DEGREE:**Masters

**Record number: 180**

**FILENAME:**Starke\_fsu\_0071E\_15069.pdf

**TITLE:**Aid and College Success: The Effect of a Grant-Filled Financial Aid Package on the Academic Performance and Persistence of Traditionally Underrepresented Students in an Academic Support Program

**AUTHOR:**Starke, Tadarrayl M.

**MEMBER (University Representative):**Jones, Maxine Deloris

**MEMBER (Professor Directing Dissertation):**Jones, Tamara Bertrand

**MEMBER (Committee Member):**Hu, Shouping

**MEMBER (Committee Member):**Park, Toby J.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Education

**CORPORATE NAME:**Department of Educational Leadership and Policy Studies

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (102 pages)

**ABSTRACT:**First-generation college students face unique challenges in higher education compared to students whose parents are college graduates. These students tend to come from lower socioeconomic backgrounds and face difficulty enrolling and persisting in higher education (Horn, 1998; Ishitani, 2003; Latino et al., 2018; Nunez & Cuccaro-Alamin, 1998; Warburton, Bugarin, & Nunez, 2001). They rely more on financial aid and employment to pay for college (Choy, 2001; Pratt, Harwood, Cavazos, & Ditzfeld, 2017), and are highly susceptible to attrition as a result of lacking the financial means to pay for college (Eitel & Martin, 2009). Postsecondary transition and academic support programs were designed to address factors affecting first-generation college student success, postsecondary transition and academic support programs (Almaraz et al., 2010; Kezar, 2000; Tate et al., 2015; Thayer, 2000; Walpole et al., 2008). Effective programs target students with the greatest financial need, assist students with navigating college, and adapt programming to student characteristics (Perna, 2015). Participants of these programs tend to have greater levels of student success compared to first-generation college students who do not participate (Ackermann, 1991; Almaraz et al., 2010; Carey, 2008; Garcia, 1991; McGlynn, 2009). At Florida State University (FSU), the Center for Academic Retention and Enhancement (CARE) is a comprehensive transition and academic support program designed to increase access and student success for first-generation college students. In 2015, FSU developed the CARE Grant to provide a minimum of 75% of the cost of attendance to CARE students in an effort to reduce the level of unmet financial need and increase student success. The purpose of the study was to explore the effects of awarding the grant-filled financial aid package on the persistence and academic achievement of first-generation college students enrolled in an academic support program. CARE provided a unique context to explore the effects of financial aid on academic performance and retention of students in an academic support program. This study is grounded in research relating to retention, first-generation college students, factors relating to their postsecondary persistence and academic success, transitional and academic support programs, financial aid and college costs, and relevant theories relating to the impact of financial aid and college costs on student retention. The research framework is influenced by Reason (2009), who developed a conceptual framework that included organizational context as an element contributing to retention. In the conceptual framework of this study, student demographics and pre-college characteristics contribute to a student’s persistence at FSU through the context of CARE participation. Financial aid and college costs variables are additional influences to a student’s persistence through to graduation. Through linear and binary logistic regression, the study analyzed the effects of multiple background, academic, and financial variables on FSU GPA, Overall GPA, and first-to-second year retention. The sample consisted of 1,425 students enrolled in CARE between summer 2013-2016 who reenrolled and received financial aid for the subsequent first term. The control group was students who enrolled in CARE in 2013 and 2014 who did not receive the CARE Grant. The study collected data on student GPAs and first-year retention to analyze the effects of the awarding the CARE Grant using data collection procedures native to FSU. The study’s findings suggested the grant had no statistically significant effect on academic performance and retention when controlling for other variables. Only high school GPA was statistically significant and positive for both FSU GPA and Overall GPA. High school GPA and Black/African American classification were statistically significant and positively related to retention. The findings are significant in advancing knowledge of first-generation student success, financial aid, and postsecondary academic support programming. Recommendations for future research include examining graduation rates for the population studied, adding additional variables to better explore what elements contribute to academic performance and retention for CARE students, and using mixed methods research to capture additional qualitative factors influencing academic performance and retention.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Educational Leadership and Policy Studies in partial fulfillment of the requirements for the degree of Doctor of Education.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 10, 2019.

**NOTE (Keywords):**academic performance, financial aid, First-generation, persistence, Retention

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Tamara Bertrand Jones, Professor Directing Dissertation; Maxine Deloris Jones, University Representative; Shouping Hu, Committee Member; Toby Park, Committee Member.

**SUBJECT:**Education, Higher

**DEGREE:**Doctoral

**Record number: 181**

**FILENAME:**Stefancik\_fsu\_0071E\_15015.pdf

**TITLE:**The Art of Testing: How Local Assessment Instruments Are Linked to Statewide Standardized Tests

**AUTHOR:**Stefancik, Christopher D. (Christopher Douglas)

**MEMBER (Professor Directing Dissertation):**Preston, Courtney

**MEMBER (University Representative):**Ke, Fengfeng

**MEMBER (Committee Member):**Akiba, Motoko

**MEMBER (Committee Member):**Rutledge, Stacey A.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Education

**CORPORATE NAME:**Department of Educational Leadership and Policy Studies

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (118 pages)

**ABSTRACT:**There is an ongoing debate among instructional personnel, parents, legislators, and the community at large about the nature and purpose of testing in the educational system. State and district-based testing programs have been criticized as “over-testing” policies. The result of the criticism culminates in a reduction of assessment program implementations – either being removed or significantly scaled back with a corresponding decrease in available student information used to lead instruction, evaluate district initiatives, or predict future student performance. This study shows progress monitoring, or interim, test usefulness and appropriateness by examining student performance scores on locally-created interim tests for middle school science courses and compare them to student performance scores on the state-wide standardized summative test to determine the predictive validity while controlling for student, class, and school characteristics. The result is a statistically significant model that predicts student success on the state science exam based on aggregated student progress monitor scores.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Educational Leadership and Policy Studies in partial fulfillment of the requirements for the degree of Doctor of Education.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 14, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Courtney Preston, Professor Directing Dissertation; Fengfeng Ke, University Representative; Motoko Akiba, Committee Member; Stacey Rutledge, Committee Member.

**SUBJECT:**Education and state

**DEGREE:**Doctoral

**Record number: 182**

**FILENAME:**Steffen\_fsu\_0071E\_14955.pdf

**TITLE:**Barrier Layer Development Local to Tropical Cyclones

**AUTHOR:**Steffen, John

**MEMBER (Professor Directing Dissertation):**Bourassa, Mark Allan, 1962-

**MEMBER (University Representative):**Elsner, James B.

**MEMBER (Committee Member):**Hart, Robert E. (Robert Edward), 1972-

**MEMBER (Committee Member):**Chagnon, Jeffrey M.

**MEMBER (Committee Member):**Clarke, Allan J.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Earth, Ocean and Atmospheric Science

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2018

**PHYSICAL DESCRIPTION:**1 online resource (107 pages)

**ABSTRACT:**The objective of this study is to quantify barrier layer development due to tropical cyclone (TC) passage using Argo float observations of temperature and salinity. To accomplish this objective, a climatology of Argo float measurements is developed from 2001-2014 for the Atlantic, eastern Pacific, and central Pacific basins. Each Argo float sample consists of a pre-storm and post-storm temperature and salinity profile pair. In addition, a no-TC Argo pair dataset is derived for comparison to account for natural ocean state variability and instrument sensitivity. The Atlantic basin shows a statistically significant increase in post-TC barrier layer thickness (BLT) and barrier layer potential energy (BLPE) that is largely attributable to an increase of 2.6 m in the post-TC isothermal layer depth (ITLD). The eastern Pacific basin shows no significant changes to any barrier layer characteristic, likely due to a shallow and highly stratified pycnocline. However, the near-surface layer freshens in the upper 30 m after TC passage, which increases static stability. Finally, the central Pacific has a statistically significant freshening in the upper 20-30 m that increases upper-ocean stratification by ~35%. The mechanisms responsible for increases in BLPE vary between the Atlantic and both Pacific basins; the Atlantic is sensitive to ITLD deepening, while the Pacific basins show near-surface freshening to be more important in barrier layer development. In addition, Argo data subsets are used to investigate the physical relationships between the barrier layer and TC intensity, TC translation speed, radial distance from TC center, and time after TC passage. ROMS model hindcasts of Hurricange Gonzalo (2014) characterize the upper-ocean response to TC precipitation forcing. Several different vertical mixing parameterizations are tested to determine their sensitivity to precipitation. For all mixing schemes, TC precipitation accounts for ocean surface freshening of about 0.3 PSU. The dominant terms in the near-surface salinity budget are the total advection and vertical diffusivity. The influence of precipitation-induced changes to the SST response is more complicated. In some areas, increased upper-ocean stratification mutes the SST cooling response. However, in other areas, cooling can be stronger when precipitation is prescribed. Dynamical changes in upper-ocean currents and the curl of the surface stress can induce a stronger cooling response in these regions.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Earth, Ocean and Atmospheric Science in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Fall Semester 2018.

**NOTE (Date of Defense):**December 5, 2018.

**NOTE (Keywords):**Air-Sea Interaction, Oceanic Barrier Layer, Tropical Cyclones

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Mark Bourassa, Professor Directing Dissertation; James Elsner, University Representative; Robert Hart, Committee Member; Jeff Chagnon, Committee Member; Allan Clarke, Committee Member.

**SUBJECT:**Meteorology

**DEGREE:**Doctoral

**Record number: 183**

**FILENAME:**Steffensen\_fsu\_0071E\_15168.pdf

**TITLE:**Managing Uncertainty: An Examination of Leadership Factors That Increase HRM System Strength

**AUTHOR:**Steffensen, David Skousen, Jr.

**MEMBER (Professor Co-Directing Dissertation):**Ferris, Gerald R.

**MEMBER (Professor Co-Directing Dissertation):**Wang, Gang, (Professor of Genomics)

**MEMBER (University Representative):**Armstrong, Deborah J.

**MEMBER (Committee Member):**Van Iddekinge, Chad H.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Business

**CORPORATE NAME:**Department of Management

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (113 pages)

**ABSTRACT:**The purpose of this dissertation was to extend research that examines the overlap between leadership and human resource management (HRM). Specifically, it sought to understand the leadership factors that would predict HRM system strength. Using a sample of 385 employees nested in 32 restaurant units, a model was examined that explored the relationships between leader political skill, leader communication behaviors, HRM system strength, and the multilevel outcomes of unit-level financial performance, leader likeability, and employee job performance. Through an integration of social/political influence theory and uncertainty reduction theory, it was predicted that leaders’ political skill and communication behaviors would lead to an increase of HRM system strength, which would then increase the three multilevel outcomes. The results of this dissertation suggest that leader communication behaviors relate the strongest to HRM system strength. There is also a modicum of support for political skill and its indirect effect, via leader communication behaviors, to HRM system strength. HRM system strength demonstrated significant effects on unit-level financial performance, albeit it the opposite direction than was hypothesized. Taken together, this dissertation makes a contribution to research related to the antecedents of HRM system strength, the refinement of the social/political influence theory, and in helping further explore the shared space between the leadership and HRM research domains.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Management in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 12, 2019.

**NOTE (Keywords):**Human resource management, Human resource system strength, Leadership, Social/political influence, Uncertainty reduction

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Gerald R. Ferris, Professor Co-Directing Dissertation; Gang Wang, Professor Co-Directing Dissertation; Deborah J. Armstrong, University Representative; Chad H. Van Iddekinge, Committee Member.

**SUBJECT:**Organizational behavior

**DEGREE:**Doctoral

**Record number: 184**

**FILENAME:**Steinman\_fsu\_0071E\_15086.pdf

**TITLE:**ADD CORRECTED TITLE: (An Examination of the Doctor of Music as a Comprehensive Degree) An Examiniation of the Doctor of Music as a Comprehensive Degree

**AUTHOR:**Steinman, Olivia

**MEMBER (Professor Directing Treatise):**Bish, Deborah, 1971-

**MEMBER (University Representative):**Brewer, Charles E. (Charles Everett)

**MEMBER (Committee Member):**Hodges, Anne R.

**MEMBER (Committee Member):**Holden, Jonathan, (Clarinetist)

**MEMBER (Committee Member):**Thrasher, Michael, 1972-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (82 pages)

**ABSTRACT:**First adopted in 1951, the Doctor of Music, or Doctor of Musical Arts degree, has been on campuses across America for nearly 70 years now. Since its inception, the main concern surrounding the education of the performer has been how best to develop and serve the artistic needs of the musician while maintaining the level of high scholastic achievement required of the doctorate. Even after decades of existence, the idea of balancing the demands of both the artist and scholar is still relevant, perhaps even more now than ever before. This treatise considers what constitutes a “comprehensive” terminal degree for performing artists in today’s field. Particular attention will be given to the curricular requirements for obtaining the Doctor of Music or Doctor of Musical Arts degree as they relate to the artist’s life post-academia. The purpose of this research is to gather information about the Doctor of Music degree, concentrating specifically on coursework and curriculum within the context of the development of the arts in America. It aims to examine what constitutes a comprehensive terminal degree for performers, the Doctor of Music or Doctor of Musical Arts degree, and proposes curricular changes to enhance the degree. The author will achieve these objectives through: 1) A brief summary of the evolution of the arts in America, with particular attention given to the period of “cultural-consciousness;” 2) A brief summary of the evolution of the Doctor of Music and Doctor of Musical Arts degrees to provide historical context for the current state of the degree; 3) A consideration of curriculum questions relevant to the doctorate in music and proposals for continued improvement.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Treatise submitted to the College of Music in partial fulfillment of the requirements for the degree of Doctor of Music.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 8, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Deborah Bish, Professor Directing Treatise; Charles Brewer, University Representative; Anne Robinson Hodges, Committee Member; Jonathan Holden, Committee Member; Michael Thrasher, Committee Member.

**SUBJECT:**Music

**DEGREE:**Doctoral

**Record number: 185**

**FILENAME:**Stemke\_fsu\_0071E\_15133.pdf

**TITLE:**Amid the Shades

**AUTHOR:**Stemke, John Ash

**MEMBER (Professor Directing Dissertation):**Callender, Clifton

**MEMBER (University Representative):**Thomas, André J. (André Jerome), 1952-

**MEMBER (Committee Member):**Wingate, Mark

**MEMBER (Committee Member):**Rogers, Nancy, 1966-

**MEMBER (Committee Member):**Jones, Evan Allan

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (66 pages)

**ABSTRACT:**Since the 19th century, numerous poets, lyricists, and hymnists have penned texts to be sung to the Welsh folk tune “Llwyn Onn,” also known as “The Ash Grove” (12.11.12.11 D). The texts explore many different themes, including the beauty of nature, courtship, limerence, the loss of loved ones, spirituality, and various Christian principles. Metaphorically, the melody shared by these diverse texts can be considered the root or seed that links each text-tree together, establishing a grove of perspectives from which the melody itself can be understood. These relationships—where each text-tree is a unique elaboration of an underlying structure— eloquently describe numerous music-compositional practices, such as (and perhaps most noticeably) the theme and variations. Given this resonant symbolism, it is surprising that a vast majority of “Ash Grove” arrangements are not variation sets. The small pool of existing sets primarily contains solos and small chamber works, is stylistically dominated by 18th- and 19th-century idioms, and does not overtly engage with symbolism or extramusical references. In order to develop this dialogue, “Amid the Shades” offers an interpretive cultivation of “The Ash Grove” that demonstrates the broader possibilities of writing variations inspired by specific words found in a musical theme’s associated texts.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the College of Music in partial fulfillment of the requirements for the degree of Doctor of Music.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 17, 2019.

**NOTE (Keywords):**Ash Grove, Chamber Orchestra, Composition, Variations

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Clifton Callender, Professor Directing Dissertation; André Thomas, University Representative; Mark Wingate, Committee Member; Nancy Rogers, Committee Member; Evan Allan Jones, Committee Member.

**DEGREE:**Doctoral

**Record number: 186**

**FILENAME:**Stright\_fsu\_0071E\_15115.pdf

**TITLE:**A Steady-State Stability Analysis of Uniform Synchronous Power Grid Topologies

**AUTHOR:**Stright, James

**MEMBER (Professor Directing Dissertation):**Edrington, Christopher S.

**MEMBER (University Representative):**Oates, William

**MEMBER (Committee Member):**Faruque, Omar

**MEMBER (Committee Member):**Andrei, Petru P.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**FAMU-FSU College of Engineering

**CORPORATE NAME:**Department of Electrical and Computer Engineering

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (59 pages)

**ABSTRACT:**Electric power grids are evolving rapidly as increased emphasis is placed on integration of renewable resources into existing power infrastructures and as new paradigms for power production and distribution, such as microgrids, are developed. Resultant grid configurations must meet the needs and requirements of existing and evolving population distributions, feasible production facilities placement, and environmental stewardship associated with power transmission and distribution infrastructures. In most developed regions, large-scale transmission infrastructures are well established, and their geographic routing is increasingly difficult to alter or amend. Renewables integration, however, directs far more attention at the power distribution level. As more local power is produced, often intermittent in nature and sometimes by consumers themselves, power distribution becomes more problematic in several respects. Conceptually, “the grid” becomes less a fixed entity and more an ever-changing amalgam of sources, loads, and preferred routes among them. All such routes must meet certain fundamental physical requirements, such as current and voltage handling capabilities. For power quality and reliability reasons, however, they also need to be “stable” in several senses, and there is currently no comprehensive approach to selecting available or potential routes to optimize the resultant “stability” of the configuration, in any of the various senses. This work develops such an approach, applicable to the steady-state stability of grids subject to several simplifying constraints. That is, it provides a framework for analyzing the steady-state stabilities of all grid topologies for grids that meet those constraints. The approach is general and abstract in nature, as this work focuses not on particular commonly studied grids but instead on the characteristics of grid topologies that lend themselves to greater or lesser degrees of steady-state stability. As a baseline study, only grids having synchronous generators are considered, with the expectation that future work will adapt inertia-based models of renewable sources to this or a similar approach. Although the approach itself is the main contribution, several interesting discoveries have already been made regarding optimal configurations of some simple topologies and on quantifying how richness of grid interconnections influences grid steady-state stability.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Electrical and Computer Engineering in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 15, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Chris S. Edrington, Professor Directing Dissertation; William Oates, University Representative; Omar Faruque, Committee Member; Petru Andrei, Committee Member.

**SUBJECT:**Electrical engineering

**DEGREE:**Doctoral

**Record number: 187**

**FILENAME:**Suguri\_fsu\_0071E\_14991.pdf

**TITLE:**Walkability Indexes, Perceptions, and Walking Behaviors of Older Adults: Focused on an Automobile Dependent-Low Density Urban Area

**AUTHOR:**Suguri, Vitor Hugo R. (Vitor Hugo Rodrigues)

**MEMBER (Professor Directing Dissertation):**Miles, Rebecca

**MEMBER (University Representative):**Munn, Jean

**MEMBER (Committee Member):**Duncan, Michael Douglas

**MEMBER (Committee Member):**Coutts, Christopher

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Social Sciences and Public Policy

**CORPORATE NAME:**Department of Urban and Regional Planning

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2018

**PHYSICAL DESCRIPTION:**1 online resource (137 pages)

**ABSTRACT:**Neighborhood walk-friendliness has become a focus for researchers and practitioners who wish to improve the health of older adults by incentivizing and providing opportunities to walk as part of daily routines. However, most research has been carried out in larger urban areas (Leslie, et al., 2005; Bracy et al., 2014; Cole, Dunn, Hunter, Owen, & Sugiyama, 2015) with an emphasis on walking for transportation and the general population. With the rapid increase in the US older adult population, most of whom live in suburban low-density residential areas, a better understanding of walk-friendliness in such a context is needed. This study investigates the associations between objective walkability and perceived neighborhood walk-friendliness, and walking behaviors among older adults in Tallahassee, Florida and surrounding county. To better understand this relationship this dissertation uses the GIS Walkability Index (Frank et al., 2010) and the Walk Score™ as measures of objective walkability. Quantitative data from a neighborhood survey and qualitative data from walk along interviews were used to capture older adult’s perception of neighborhood walk-friendliness. This dissertation seeks to determine; i) the relationship between objective walkability and the perceptions of neighborhood walk-friendliness of older adults themselves; ii) the extent to which objective walkability and perceived neighborhood walk-friendliness influence walking behaviors, and iii) how micro-environmental factors influence older adult’s walking activities. A multiple methods approach is used in this study, where the main approach is quantitative, and the qualitative inquiry provides a deeper understanding of older adult’s perceptions of neighborhood walk-friendliness at the micro-environmental level. The findings of this dissertation show that the walkability indexes are significant predictors of walks for transportation but do not predict whether older adults engage in any brisk or leisure walking. The perceived count of destination types was found to be a strong predictor of any destination walking and played a mediating role between the GIS Index and any destination walking. However, perceived walk-friendliness did not show the same significance as the perceived count of destination types. Finally, the walk-along interviews revealed that the micro-environmental factors influence the older participants’ decision about when and where to walk rather than whether they walk at all. It also provided deeper understanding of the perceived walk-friendliness variable.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Urban and Regional Planning in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Fall Semester 2018.

**NOTE (Date of Defense):**December 10, 2018.

**NOTE (Keywords):**Older adults, Perception, Walkability, Walking

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Rebecca Miles, Professor Directing Dissertation; Jean Munn, University Representative; Michael Duncan, Committee Member; Christopher Coutts, Committee Member.

**SUBJECT:**City planning

**DEGREE:**Doctoral

**Record number: 188**

**FILENAME:**Sun\_fsu\_0071E\_15036.pdf

**TITLE:**Exploring Cis Elements and Trans-Acting Factors Involved in the Human Inactive X Chromosome Organization and Compaction

**AUTHOR:**Sun, Zhuo

**MEMBER (Professor Directing Dissertation):**Chadwick, Brian P.

**MEMBER (University Representative):**Gunjan, Akash

**MEMBER (Committee Member):**Dennis, Jonathan Hancock

**MEMBER (Committee Member):**Yu, Hong-Guo

**MEMBER (Committee Member):**Deng, Wu-Min

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Biological Science

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (131 pages)

**ABSTRACT:**In this dissertation, I have explored cis and trans factors involved in the organization and compaction of the human inactive X chromosome (Xi). I describe here three trans factors (SMCHD1, LRIF1 and SETDB1) that were found to have important roles in Xi chromatin compaction, as demonstrated by a doubling of the Xi volume in their absence. I also report a novel enhancer element on the Xi that is reactivated in SETDB1 mutants and is in part responsible for the Xi decompaction phenotype, and displays complex cis and trans communication between the active X chromosome and Xi. We have generated SMCHD1 and LRIF1 mutants using both TALENs and CRISPR-Cas9 genome engineering platforms. Loss of either protein results in Xi decompaction and reactivation of some Xi genes. Using the X-linked choroideremia locus (CHM) as an example of a reactivated gene, we show that reactivation is coupled with a reduction in the repressive heterochromatin markers histone H3 trimethylated at lysine 9 (H3K9me3) and 27 (H3K27me3) and an increase in the euchromatin marker histone H3 trimethylated at lysine 4 (H3K4me3) in the promoter region. Alongside these chromatin changes, we observed movement of the CHM locus away from the H3K9me3 territory towards the H3K27me3 territory. Previous data from our lab showed that loss of the macrosatellite repeats DXZ4 from the Xi resulted in large-scale changes in cis to the three-dimensional organization of the Xi, including fragmentation of the chromosome territory as observed by light microscopy. Intriguingly, deletion of SMCHD1 in DXZ4 Xi mutants results in a more pronounced Xi decompaction phenotype than that of SMCHD1 loss alone, suggesting that both perform complementary roles to compact the Xi. In the effort to determine which histone lysine methyl-transferase is responsible for H3K9me3 at the Xi, we isolated SETDB1 TALEN mutant clones and discovered that like SMCHD1 and LRIF1, loss of SETDB1 leads to decompaction of the Xi territory. Furthermore, in the SETDB1 mutants, we observed drastic chromatin changes within the 3’ third of the 1.4 megabase Interleukin 1 Receptor Accessory Protein-Like 1 (IL1RAPL1) gene. In this genomic interval, there is localized loss of repressive chromatin defined by H3K9me3 coupled with a gain of the active makers defined by histone H3 di-methylated at lysine-4 (H3K4me2) and acetylated at lysine 27 (H3K27Ac). The DNA underlying the major peak of H3K27Ac possesses very powerful enhancer activity in vitro and is located immediately adjacent to the long terminal repeat of an endogenous retrovirus element ERVL-MaLR that is reactivated from the Xi in the SETDB1 mutants. Reactivation of the ERVL-MaLR results in a significant increase in the transcription of novel bi-directional transcripts originating from the 3’ region, coupled with a significant reduction in full-length IL1RAPL1 transcripts originating from the endogenous 5’ promoter. To determine if this enhancer element contributes to decompaction of the Xi, clones were isolated in which it had been deleted from either the Xa or Xi using CRISPR-Cas9 system. We found that deletion of the enhancer from the Xi increased detection of full-length IL1RAPL1 transcript in trans, but did not result in Xi decompaction. In contrast, deletion of the enhancer from the Xa decompacted the Xi territory and resulted in a total loss of transcript originating from the 5’ promoter on the Xa. These data revealed complex cis and trans effects that affects IL1RAPL1 gene expression and Xi chromatin compaction. Importantly, this same interval is centrally located in a known fragile site on the X chromosome that is frequently lost in patients with intellectual disability. Portions of this dissertation have been published or are being prepared for publication. Parts of Chapter 1 has been published as a book chapter in Epigenetics: Current Research and Emerging Trends, Caister Academic Press (Chadwick, 2015). The data presented in Chapter 3 has been published in Epigenetics & Chromatin (Sun and Chadwick, 2018). Data presented in Chapter 2 are in the process of being prepared as manuscripts for publication.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Biological Science in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 4, 2019.

**NOTE (Keywords):**chromatin compaction, gene silencing, human inactive X chromosome

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Brian P. Chadwick, Professor Directing Dissertation; Akash Gunjan, University Representative; Jonathan H. Dennis, Committee Member; Hong-guo Yu, Committee Member; Wu-min Deng, Committee Member.

**SUBJECT:**Biology

**DEGREE:**Doctoral

**Record number: 189**

**FILENAME:**Tan\_fsu\_0071E\_14891.pdf

**TITLE:**Towards Ubiquitous Sensing Using Commodity WiFi

**AUTHOR:**Tan, Sheng

**MEMBER (Professor Directing Dissertation):**Yang, Jie

**MEMBER (University Representative):**Shanbhag, Sachin

**MEMBER (Committee Member):**Wang, An-I Andy

**MEMBER (Committee Member):**Duan, Zhenhai

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Computer Science

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (99 pages)

**ABSTRACT:**Recently, the prevalence of WiFi devices and ubiquitous coverage of WiFi network provide us the opportunity to extend WiFi capabilities beyond communication, particularly in sensing the physical environment. Most existing systems that enable human sensing utilizing commodity WiFi devices are simply rely on profile training based techniques. Such techniques suffer from performance degradation when configuration changes after training. Furthermore, those systems can not work under multi-user scenarios. To overcome the limitations of existing solutions, this dissertation introduces the design and implementation of three systems. First, we propose MultiTrack, a multi-user indoor tracking and activity recognition system. It leverages multiple transmission links and all the available bandwidth at 5GHz of commodity WiFi to achieve tracking multiple users simultaneously. Second, we present WiFinger, a fine-grained finger gesture recognition system, which utilizes single RF device and does not require per-user or per-location training. Lastly, we present FruitSense, a RF based fruit ripeness level detection system that achieves environment-independent sensing. Such system demonstrates the wireless sensing can be utilized beyond human sensing to the biosensing field.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Computer Science in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 1, 2019.

**NOTE (Keywords):**activity recognition, fruit sensing, gesture recognition, indoor tracking, localization, wireless sensing

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Jie Yang, Professor Directing Dissertation; Sachin Shanbhag, University Representative; An-I Andy Wang, Committee Member; Zhenhai Duan, Committee Member.

**SUBJECT:**Computer science

**DEGREE:**Doctoral

**Record number: 190**

**FILENAME:**Tanis\_fsu\_0071E\_15125.pdf

**TITLE:**Elaborations of Classical-Model Sentences and Periods in Richard Strauss's Songs for Voice and Piano

**AUTHOR:**Tanis, Joshua

**MEMBER (Professor Co-Directing Dissertation):**Kraus, Joseph Charles, 1955-

**MEMBER (Professor Co-Directing Dissertation):**Buchler, Michael Howard, 1966-

**MEMBER (University Representative):**Fisher, Douglas L.

**MEMBER (Committee Member):**Jones, Evan Allan

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (188 pages)

**ABSTRACT:**In this dissertation, I address several ways in which Richard Strauss elaborates the Classical-model sentence and period paradigm: through harmonic elaborations by way of Strauss’s chromatic, Romantic-style harmonic palette; through formal elaborations by way of phrase expansion; or through elaborations of many musical parameters, which yield hybrid variants of sentences and periods. I offer labels for these hybrids based on their melodic-motivic, harmonic, and phrase-length profile: the Straussian Hybrid Sentence, the Straussian Hybrid Period, and the Lone Antecedent Phrase. These labels encapsulate a sense of their musical shape, showing how the resulting formal structures derive from familiar Classical models, but in some Strauss-specific ways. My methodology for analyzing Strauss’s songs takes on its own hybrid approach, which responds to Janet Schmalfeldt’s 1991 article on reconciling form-function theory with Schenkerian theory and analysis. It is often the case that where Strauss obfuscates normative Classical theme-types, he embeds the inherent unification of their formal structure in other ways, namely through voice leading and the melodic-motivic interplay between voice and piano. Accordingly, I present form overlays and voice-leading sketches for each song excerpt or full-song analysis. By so doing, I highlight how one kind of analysis informs the other, especially when one or the other type of analysis does not seem to fully account for a particular passage of music. To be sure, the form overlays and voice-leading sketches work in tandem with my analysis of poetic structure, meaning, and text-setting in each song. In Chapter 2, I investigate Classical-model sentences, sixteen-measure sentences, and Straussian hybrid sentences in excerpts from seven songs. Instances of Classical-model sentences and sixteen-measure sentences in Strauss’s songs adhere strictly to the melodic-motivic, harmonic, and phrase-length features described by William Caplin, such as in “Befreit,” Op. 39, No. 4, and “Ich trage meine Minne,” Op. 32, No. 1. In some cases, Strauss expands Classical-model sentences by various phrase-expansion techniques, such as in “Mohnblumen,” Op. 22, No. 2, and “Leises Lied,” Op. 39, No. 1. Yet in other songs, Strauss expresses elaborations of sentences whose melodic-motivic organization is noticeably different from the Classical model; specifically, these structures—which I label the Straussian Hybrid Sentence—exhibit a “presentation” phrase comprising a compound basic idea rather than a basic idea and its repetition (like Caplin’s Hybrid 3 model). I identify these structures in “Winternacht,” Op. 15, No. 2, “Wiegenliedchen,” Op. 49, No. 3, and “Allerseelen,” Op. 10, No. 8. In Chapter 3, I analyze examples of Classical-model periods, in addition to two related categories: the Straussian Hybrid Period and the Lone Antecedent Phrase. Straussian Hybrid Periods comprise a normative antecedent phrase (4-bar compound basic idea, ending with a weak cadence) followed by a hybrid consequent phrase that is guised as one of several possible formal outcomes, such as a sentence, a continuation phrase (like Caplin’s Hybrid 1 model), or a cadential unit (like Caplin’s Hybrid 2 model). In the case of any of these three options, the hybrid consequent phrase ends with a stronger cadence than the one at the end of the antecedent phrase. The final formal structure I address is the Lone Antecedent Phrase, which describes an antecedent phrase that is not followed by a consequent phrase, whether normative or hybrid. In these cases, it is difficult to speak of a “true” periodic design; rather, the first half of a perceived period is present, but there is no musical (or even rhetorical) completion of a complementary musical unit. In all, I survey six excerpts: “Für fünfzehn Pfennige,” Op. 36, No. 2, and “Ach weh unglückhaften Mann,” Op. 21, No. 4 (Classical-model periods); “Mit deinen blauen Augen,” Op. 56, No. 4, “Die Zeitlose,” Op. 10, No. 7, and “Schön sind, doch kalt die Himmelssterne,” Op. 19, No. 3 (Straussian Hybrid Periods); and “Das Bächlein,” Op. 88, No. 1 (Lone Antecedent Phrase). In Chapter 4, I provide three full-song analyses: “Zueignung,” Op. 10, No. 1, “Allerseelen,” and “Befreit.” Through analyses at multiple levels of formal and voice-leading structure, I highlight the inherent interaction between these two musical parameters, showing specifically how they relate to the poetry. In “Zueignung” and “Allerseelen,” there is a progression from obscurity to clarity that spans the duration of the song. Conversely, the poem from which “Befreit” is derived poses the opposite rhetorical effect—that is, “Befreit” traces a progression from clarity to obscurity. The analyses presented in Chapter 4 depict how Strauss’s use and elaboration of Classical theme-types is done so in the service of conveying poetic meaning over the span of an entire song.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the College of Music in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 9, 2019.

**NOTE (Keywords):**Caplin, Form, Period, Schenker, Sentence, Strauss

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Joseph Kraus, Professor Co-Directing Dissertation; Michael Buchler, Professor Co-Directing Dissertation; Douglas Fisher, University Representative; Evan Allan Jones, Committee Member.

**DEGREE:**Doctoral

**Record number: 191**

**FILENAME:**Terrill\_fsu\_0071E\_14992.pdf

**TITLE:**Lateral Septal GLP-1 Pathways

**AUTHOR:**Terrill, Sarah J. (Sarah Joyce)

**MEMBER (Professor Directing Dissertation):**Williams, Diana L.

**MEMBER (University Representative):**Panton, Lynn B. (Lynn Biship)‏

**MEMBER (Committee Member):**Spector, Alan C.

**MEMBER (Committee Member):**Fadool, Debra Ann

**MEMBER (Committee Member):**Schatschneider, Christopher

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Psychology

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (117 pages)

**ABSTRACT:**Hindbrain glucagon-like peptide 1 (GLP-1) neurons project to numerous forebrain areas, including the lateral septum (LS). Here, we propose this pathway represents a direct link between satiation processing and food reward, as LS-projecting GLP-1 neurons directly connect vagal afferent signaling to a reward-related brain region. The four studies presented in this dissertation broadly address the contribution of LS GLP-1 receptors (GLP-1R) in the control of feeding behavior under both non-stressed and stressed conditions in rats and mice. We first confirmed that pharmacologic activation of LS GLP-1R suppresses feeding. When we blocked these receptors rats and mice, we found that endogenous activation of LS GLP-1R promotes satiety. Because the LS is known to play a role in motivation, we next investigated the role of LS GLP-1R in motivation for food by examining operant responding for sucrose on a progressive ratio (PR) schedule. Our findings here suggest that GLP-1R in the dorsal subregion of the LS (dLS) affect motivation for food in both rats and mice. While we initially focused on the role of GLP-1 under normal, non-stressed conditions, central GLP-1 is also involved in behavioral and endocrine responses to stress. Here we demonstrated for the first time that restraint stress robustly activates hindbrain GLP-1-producing neurons in mice and found that LS GLP-1R blockade attenuates 30-min restraint stress-induced hypophagia in both rats and mice. LS neurons project to several other brain regions known to play a critical role in the control of food intake. In the final study, we determined the distinct axonal targets of LS GLP-1R bearing neurons. This anatomical analysis begins to unravel the downstream circuitry of GLP-1 signaling in the LS and has revealed candidate neural pathways through which LS GLP-1 signaling may alter food intake and other behavioral responses to stress. Together, the results presented in this dissertation provide clear evidence that there is in fact significant overlap in the neural pathways that mediate satiation signaling and food reward.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Psychology in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**February 27, 2019.

**NOTE (Keywords):**food intake, food reward, glucagon-like peptide 1, lateral septum, obesity, stress

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Diana Williams, Professor Directing Dissertation; Lynn Panton, University Representative; Alan Spector, Committee Member; Debra Fadool, Committee Member; Chris Schatschneider, Committee Member.

**SUBJECT:**Nanoscience

**DEGREE:**Doctoral

**Record number: 192**

**FILENAME:**Thomas\_fsu\_0071N\_15224.pdf

**TITLE:**Before, during, and Beyond: Historical Time and the German Revolutions of 1848 and 1849

**AUTHOR:**Thomas, Trevor

**MEMBER (Professor Directing Thesis):**Williamson, George S.

**MEMBER (Committee Member):**Gellately, Robert, 1943-

**MEMBER (Committee Member):**Herrera, Robinson A., 1966-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of History

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (91 pages)

**ABSTRACT:**This study explores the ways by which notions of historical time informed those involved in the German revolutions of 1848 and 1849. Building on the theories of historical time offered by the German historian and theorist Reinhart Koselleck, this study argues that those opposing and supporting the revolutions operated within a temporal schema that was ideologically constructed. The ubiquitous presence of the French Revolution in German revolutionary and counterrevolutionary discourse, the deliberate creation of an ideologically-charged “revolutionary moment,” and the multi-layered perceptions of time common to those involved in Germany’s failed constitutional project all demonstrate the malleable nature of the past, present, and future. The study employs the stenographic reports of the German National Assembly, pamphlets, petitions, memoirs, diaries, political tracts, and cultural productions to back these claims.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the Department of History in partial fulfillment of the requirements for the degree of Master of Arts.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 18, 2019.

**NOTE (Keywords):**1848, Germany, Historical Time, Koselleck, Revolution

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**George S. Williamson, Professor Directing Thesis; Robert Gellately, Committee Member; Robinson Herrera, Committee Member.

**SUBJECT:**History

**DEGREE:**Masters

**Record number: 193**

**FILENAME:**Towey\_fsu\_0071E\_15031.pdf

**TITLE:**Heavenward a Novel

**AUTHOR:**Towey, Sean

**MEMBER (Professor Directing Dissertation):**Horack, Skip

**MEMBER (University Representative):**Keel, Pamela K., 1970-

**MEMBER (Committee Member):**Winegardner, Mark, 1961-

**MEMBER (Committee Member):**Gaines, Alisha

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of English

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (385 pages)

**ABSTRACT:**Heavenward is a semi-autobiographical novel that follows Cillian O’Mara, who has recently left a Catholic seminary run by the Society of Jesus, more commonly known as the Jesuits. He goes to confession with his former superior who for penance instructs him to write about his experience. Cillian moves through the major developments of his life—the abuse he suffers at the hands of his step-father, who subsequently murders his mother; his father’s alcohol addiction; his own trials and travails as a student at a Jesuit preparatory school; and the difficult and often conflicting desires he has for entering and then leaving the Jesuits. He also writes about his current life as he navigates adulthood away from the Jesuits, including his romantic endeavors and a job teaching at a low-income all-boys Catholic middle school in St. Louis. By telling the story of his life prior to and within the Jesuits, he hopes to find a pathway toward some form of self-fulfillment.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of English in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 25, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Skip Horack, Professor Directing Dissertation; Pamela Keel, University Representative; Mark Winegardner, Committee Member; Alisha Gaines, Committee Member.

**DEGREE:**Doctoral

**Record number: 194**

**FILENAME:**Trost\_fsu\_0071E\_15123.pdf

**TITLE:**Essays in Applied Microeconomics: Topics in Urban and Education Economics

**AUTHOR:**Trost, Brian

**MEMBER (Professor Directing Dissertation):**Kantor, Shawn Everett

**MEMBER (University Representative):**Park, Toby J.

**MEMBER (Committee Member):**Kitchens, Carl T.

**MEMBER (Committee Member):**Zuehlke, Thomas W. (Thomas William), 1957-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Social Sciences and Public Policy

**CORPORATE NAME:**Department of Economics

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (86 pages)

**ABSTRACT:**This dissertation is a collection of three independent chapters on topics in applied microeconomic analysis, focusing on issues in urban and education economics. The first chapter examines local housing values in Dallas after the repeal of the Wright Amendment, legislation that limited activity at the neighborhood airport Love Field. I find that, on average, the repeal of the Wright Amendment led to a 11% increase in rents and a 10\% increase in housing values for units less than 6 miles of the Love Field Airport. The second chapter examines interest in the education industry following Act 10, a Wisconsin legislative act that limited the collective bargaining power of teachers' unions in the state. Comparing the share of postsecondary students enrolled in a teacher preparation program in Wisconsin before and after Act 10 and relative to similar states, we find that on average Act 10 lead to a 12% increase in teacher preparation enrollment. Finally, the third chapter examines spatial crime activity in cities when hosting large events, such as college football games. Using geo-located daily level crime data from college towns, I estimate that crime increases in census tracts closer to the event by approximately 44% relative to tracts farther away on days with a football game, and is spatially concentrated in areas near the stadium.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Economics in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 15, 2019.

**NOTE (Keywords):**act 10, airports, applied microeconomics, teachers unions, wright amendment

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Shawn Kantor, Professor Directing Dissertation; Toby Park, University Representative; Carl Kitchens, Committee Member; Tom Zuehlke, Committee Member.

**SUBJECT:**Economics

**DEGREE:**Doctoral

**Record number: 195**

**FILENAME:**Tuning\_fsu\_0071E\_15080.pdf

**TITLE:**Transnational Ethnic Linkages, Bias, and Conflict Intervention

**AUTHOR:**Tuning, Rachel

**MEMBER (Professor Directing Dissertation):**Souva, Mark A.

**MEMBER (University Representative):**Grant, Jonathan A., 1963-

**MEMBER (Committee Member):**Ehrlich, Sean D.

**MEMBER (Committee Member):**Beazer, Quintin H.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Social Sciences and Public Policy

**CORPORATE NAME:**Department of Political Science

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (139 pages)

**ABSTRACT:**Do transnational ethnic linkages between third party states and disputants affect the probability of intervention? If so, how does regime type, power distribution of groups, and borders affect this decision? Do these interventions help to end interstate conflicts? Transnational ethnic linkages are an under-appreciated aspect of a state’s decision to enter international conflicts. While there is extensive research on interventions in conflicts and the role of ethnicity in civil war origination, the role of ethnic ties between potential interveners and interstate disputants remains unaccounted for (e.g. Reid 2015; Stojek and Chacha 2015; Findley and Marineau 2014; Huibregtse 2010; Saideman 2002). This is problematic when we consider the role of ethnicity in generating bias. Extant literature shows that when an intervening party has a bias toward a disputant, the intervention is typically more effective, but ethnic biases are not considered in extant literature (Block and Siegel 2011; Kydd 2006; Crescenzi, Kadera, Mitchell et al. 2011; Favretto 2009; Saideman 2001). In this dissertation, I theoretically separate conflict management from conflict intervention. This distinction is important because conflict intervention does not the need the consent of disputants and these interventions are by nature, biased. I utilize a unique triadic, multilevel dataset and a selection model to test my hypotheses. The results demonstrate that transnational ethnic linkages are an important aspect of a third party state’s decision to intervene in an interstate conflict.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Political Science in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**February 6, 2019.

**NOTE (Keywords):**Conflict Intervention, Conflict Management, Ethnic Identity, International Conflict

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Mark Souva, Professor Directing Dissertation; Jonathan A. Grant, University Representative; Sean Ehrlich, Committee Member; Quintin Beazer, Committee Member.

**SUBJECT:**International relations

**DEGREE:**Doctoral

**Record number: 196**

**FILENAME:**Turner\_fsu\_0071N\_15068.pdf

**TITLE:**"It's Not You, It's Me: " Implicitly Assessed Partner Attitudes Predict Mood but Not Interpersonal Evaluations

**AUTHOR:**Turner, Jordan A.

**MEMBER (Professor Directing Thesis):**McNulty, James

**MEMBER (Committee Member):**Meltzer, Andrea L.

**MEMBER (Committee Member):**Proudfit, Greg Hajcak

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Psychology

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (36 pages)

**ABSTRACT:**Although automatic partner attitudes are a critical predictor of long-term relationship outcomes, we know very little about their more immediate implications. Different theoretical perspectives suggest different possibilities—automatic partner attitudes may predict (a) daily interpersonal judgments, (b) judgments of alternative sources, such as mood, or (c) no daily judgments if these attitudes are unconscious. We assessed automatic partner attitudes implicitly and interpersonal evaluations and mood via self-report for 14 days in a sample of newlywed couples. More negative partner attitudes were associated with more negative daily mood and less positive daily mood but not daily evaluations of the relationship over the 14 days. These findings suggest that people (a) do have access to the content of automatic evaluations but may not always realize their source but (b) may protect desired beliefs by explaining away automatic evaluations that are undesirable.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Thesis submitted to the Department of Psychology in partial fulfillment of the requirements for the degree of Master of Science.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 2, 2019.

**NOTE (Keywords):**Automatic partner attitudes, Dual process models, Implicit attitudes, Marriage, Mood

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**James K. McNulty, Professor Directing Thesis; Andrea L. Meltzer, Committee Member; Greg Hajcak, Committee Member.

**SUBJECT:**Social psychology

**DEGREE:**Masters

**Record number: 197**

**FILENAME:**Tyrrell\_fsu\_0071N\_15223.pdf

**TITLE:**Musical Commemoration of the Chinese Sent-down Movement: Narratives of Traumatic Cultural Memory in Diaspora

**AUTHOR:**Tyrrell, Mayna

**MEMBER (Professor Directing Thesis):**Bakan, Michael B.

**MEMBER (Committee Member):**Jackson, Margaret R.

**MEMBER (Committee Member):**Gunderson, Frank D.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (146 pages)

**ABSTRACT:**The sent-down youth movement (1968-1978), an initiative that grew out of the Cultural Revolution in China, mandated that youth from urban centers be reeducated in rural regions in an effort to realize Mao’s idealized vision of a communist society. This thesis investigates how traumatic memory of the Cultural Revolution and the sent-down youth movement is processed through individual narratives from the diasporic “Cultural Revolution generation.” It does so largely in the context of fieldwork-based analysis and interpretation of multiple performances of a particular large-scale work, Ask the Sky and the Earth: An Oratorio Cantata for the Sent-Down Youth, a work which shapes zhiqing (sent-down youth) memories and discourse at both individual and collective levels. My theoretical framework primarily draws from Su Zheng’s analysis of diaspora and Paul Connerton’s work with traumatic memory. Through this examination of zhiqing traumatic memory, I assert that the history and narrative of forced displacement which defines zhiqing identity amplifies the impact of its commemoration in diasporic communities. The performance of this cantata forces members of the “Cultural Revolution generation” to confront narratives outside of their own and to reinterpret their past, revealing a multiplicity of experiences and interpretations that individuals produce, experiences which do not fit neatly into either the national Chinese or resistant diasporic narratives of the movement. Through such investigation, this work contributes in a significant way not only to the ethnomusicological study of Chinese music, but more broadly to the theorization of traumatic cultural memory in contemporary Chinese diasporic culture.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the College of Music in partial fulfillment of the requirements for the degree of Master of Music.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 17, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Michael B. Bakan, Professor Directing Thesis; Margaret Jackson, Committee Member; Frank Gunderson, Committee Member.

**SUBJECT:**Music

**DEGREE:**Masters

**Record number: 198**

**FILENAME:**Udhan\_fsu\_0071E\_14833.pdf

**TITLE:**Speaker-Dependent Acoustic Emotion Recognition for Vehicle-Centric Applications

**AUTHOR:**Udhan, Tejal

**MEMBER (Professor Directing Dissertation):**Bernadin, Shonda

**MEMBER (University Representative):**Sobanjo, John Olusegun, 1958-

**MEMBER (Committee Member):**Foo, Simon Y.

**MEMBER (Committee Member):**Harvey, Bruce A., 1961-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**FAMU-FSU College of Engineering

**CORPORATE NAME:**Department of Electrical and Computer Engineering

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2018

**PHYSICAL DESCRIPTION:**1 online resource (94 pages)

**ABSTRACT:**Speech is the most natural and fastest method of communication between humans. This fact compelled researchers to study acoustic signals as a fast and efficient means of interaction between humans and machines. For authentic human-machine interaction, the method requires that the machines should have the sufficient intelligence to recognize human voices and their emotional state. It is well-known that the emotional state of human drivers highly influences his/her driving performance. For example, there are many reports that describe road-rage incidents where drivers become emotionally enraged due to the actions of another driver. This anger may lead to a high-speed chase, tailgating, and sometimes even death due to a traffic crash or physical contact. If a car is ‘intelligent-enough’ to respond to a driver’s emotional state, it may be able to thwart negative outcomes of road-rage incidents. Speech emotion recognition, extracting the emotional state of speakers from acoustic data, plays an important role in enabling machines to be ‘intelligent’. Speech emotion recognition is an emerging field and presents many challenges. The set of most powerful features which can distinguish different emotions is not defined; hence, the selection of features is a critical task. Acoustic variability presented by numerous speech properties, such as length and complexity of human speech utterance, speaker’s gender, speaking styles and rate of speech, directly affects the most common speech features; thereby affecting the system performance. Most of the researchers used statistical approaches to recognize human speech; however statistical methods are complex and need more computational time. Moreover, emotion recognition being the developing field, researchers are exploring facial, gestural and acoustical features for emotion recognition. However, for vehicle-centric applications, audio and speech processing may provide better noninvasive and less distracting solutions than other interactive in-vehicle infotainment systems. Hence, acoustic feature extraction for emotion recognition in human drivers is a preferred design choice of this research. The goal of this research is to develop an optimal feature extraction algorithm for emotion recognition of four most common emotions (anger, happy, sad and no emotion). In this dissertation, six acoustic features are studied using decision-tree based algorithms to recognize speech-based human emotions and reduce the complexity of the system. The speech features used are pitch, intensity, frequency formants, jitter, shimmer and zero crossing rate. Pitch and intensity are qualitative voice feature, frequency formants and jitter provide the spectral features and zero-crossing rate and shimmer suffice as temporal features of human acoustical speech. The combination of different types of speech features is utilized to increase the accuracy of system. The decision tree-based algorithms are designed in MATLAB and are calculated using confidentiality-interval for each feature. For acoustic data visualization, PRAAT software is used. The system is designed for speaker-dependent emotion recognition since the accuracy of system is more as the utilized features are qualitative voice features; which are best-suited for emotion recognition. Data from two males and two females is analyzed for this dissertation. For the actual realization of system, noise analysis is performed using 5dB, and 15 dB signal-to-noise ratio levels. These are minimum and maximum noise levels experienced while driving on a freeway and parking lot. This dissertation is composed of five chapters. Chapter 1 presents the mechanism of human speech production and human emotions in speech. It comprises of various emotions and importance of acoustic signal for emotion recognition. Chapter 2 includes different local and global acoustic features, existing methods of speech recognition and emotion recognition and discusses the weaknesses of existing speech recognition systems for acoustical emotion recognition using various acoustic features and analysis algorithms. Chapter 3 outlines the proposed solution for acoustic emotion recognition using decision-tree based algorithm. It includes a description of each acoustical feature, data preparation techniques, data analysis methods, and algorithm design. Chapter 4 consists of results, discussion and comparison of proposed algorithm with state-of-the-art acoustic emotion recognition algorithms. Finally, conclusion, limitations and future work is discussed in chapter 5.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Electrical and Computer Engineering in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Fall Semester 2018.

**NOTE (Date of Defense):**November 29, 2018.

**NOTE (Keywords):**Acoustic Emotion Recognition, Acoustic Features, Speech Processing

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Shonda Bernadin, Professor Directing Dissertation; John O. Sobanjo, University Representative; Simon Foo, Committee Member; Bruce Harvey, Committee Member.

**SUBJECT:**Electrical engineering

**DEGREE:**Doctoral

**Record number: 199**

**FILENAME:**Vanderbilt\_fsu\_0071E\_15007.pdf

**TITLE:**Understanding Variation in Complex Displays and Mate Choice in a Lekking Species with Cooperative Dual-Male Courtship

**AUTHOR:**Vanderbilt, Carla Curry

**MEMBER (Professor Directing Dissertation):**DuVal, Emily H.

**MEMBER (University Representative):**Johnson, Frank, (Professor of Psychology)

**MEMBER (Committee Member):**Lemmon, Emily C.

**MEMBER (Committee Member):**Travis, Joseph, 1953-

**MEMBER (Committee Member):**Winn, Alice A.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Biological Science

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (100 pages)

**ABSTRACT:**Motor displays (displays that involve visible body movements) are an integral component of many courtship displays and have the potential to be important signals of male quality to females during mate choice. The whole organism is used in the execution of movements, and so the performance of motor displays may be an even more valuable signal than static traits commonly studied in sexual selection literature. In lekking species where a female chooses a mate from among displaying males, motor displays provide an especially interesting opportunity for studying mate choice. Which male a female decides to mate with is dependent on which males she observes. Therefore, it is important to not only look at variation in male motor performance and mating success across the entire lek, but also at the phenotypic variation between the males each female is actively choosing between. My dissertation research investigates the causes of variation in the performance of complex, acrobatic displays in the lance-tailed manakin (Chiroxiphia lanceolata; Aves: Pipridae), and the resulting fitness consequences of that variation. Courtship displays in this species vary from being cooperative, with a dominant alpha and subordinate beta male present, to solo, involving only the alpha. Males also perform displays in the absence of females that are very similar to courtship displays. One potential cause of variation in the performance of complex displays is social context. I examined the effects of social context on male displays by quantifying the predictability of display elements in the presence and absence of females. I found that the predictability of individual performance within the dual-male interaction did not differ with female presence; however, entropy metrics describing the interaction of the alpha and beta male indicated that displays for females were more predictable and coordinated. This suggests that the dual-male phenotype is likely an important factor in female mate choice for cooperatively displaying species. The use of male-male cooperation in displays is also variable in this species, and so I next investigated what influences a male’s decision to cooperate and how this decision, in addition to other factors, influences female choice. I found that more experienced alphas were less likely to display cooperatively. Surprisingly, females were more likely to copulate after a solo display, independent of alpha experience. Females that were older, renesting, and closer to egg-laying were more likely to copulate after any given display. Considering effects of the sequence of displays viewed by individual females revealed that females were more likely to observe cooperative displays if they had done so in their previous visit, and more likely to copulate if they had copulated during their previous visit. My results demonstrate non-independence of female visits, suggesting females accumulate information in extended mate searches. These results also challenge the view that cooperative courtship primarily serves to enhance mating success via female choice, and more generally challenges the tendency to assume that the most obvious traits are the most salient for female choice. The complexity of displays and the limitation of current analytical techniques for incorporating sequences of events led me to discover a novel approach called multi-channel sequence analysis (MCSA) to analyze simultaneously the sequences of male and female behaviors during courtship. This approach, to my knowledge, has never before been applied to behavioral ecology. I identified three distinct clusters of display types, based on the combination of male and female behavioral sequences. Displays belonging to the first cluster were more likely to involve male-male cooperation, and those belonging to the second cluster more likely to end in copulation. These results suggest that behavioral sequences from multiple interacting individuals can be productively combined to provide new perspectives on displays, and that MCSA has the potential to be an important new tool in the field of behavioral ecology. In summary, mate choice is a complicated process, and various factors including social context and individual characteristics of males and females can influence the performance of complex displays. This research provides insight into cooperative behavior and utilizes novel statistical approaches that provide a more holistic view of complex displays. This dissertation includes two supplementary video files “Video B-1-Cooperative display example-Chiroxiphia lanceolata.mp4” and “Video B-2-Solo Display Example-Chiroxiphia lanceolata.mp4” that correspond with Appendix B for Chapter 3. These videos are examples of a lance-tailed manakin cooperative and solo display, respectively.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Biological Science in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 14, 2019.

**NOTE (Keywords):**Complex Displays, Cooperation, Courtship, Mate Choice, Pipridae, Sexual Selection

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Emily H. DuVal, Professor Directing Dissertation; James F. Johnson, University Representative; Emily C. Lemmon, Committee Member; Joseph A. Travis, Committee Member; Alice A. Winn, Committee Member.

**SUBJECT:**Biology

**DEGREE:**Doctoral

**Record number: 200**

**FILENAME:**Velasquez\_fsu\_0071N\_15101.pdf

**TITLE:**When Buying Milk, Do You Care about the Cow? : Developing and Validating a Measure of Focus on Ethical Considerations

**AUTHOR:**Velasquez, Kassidy R. (Kassidy Renae)

**MEMBER (Professor Directing Thesis):**Conway, Paul

**MEMBER (Committee Member):**Maner, Jon K.

**MEMBER (Committee Member):**Ganley, Colleen M.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Psychology

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (102 pages)

**ABSTRACT:**People differ in the degree to which they focus on the ethical aspects of daily experiences. Past work operationalizes such differences using general, abstract items focused on perceiving and deliberating about moral conflict, but this conception may not capture the full psychological experience of morality, leading to problems with predictive validity. We built on past work to create a new measure, the Focus on Ethical Considerations (FEC) scale, which focuses on concrete moral experiences whether or not they involve conflict, allows for intuition and emotion, and invites relative rather than absolute judgments, in a bid to increase construct and predictive validity. Across three studies, the FEC scale improved upon the predictive accuracy of the moral attentiveness scale for relevant measures such as moral identity, the moralization of everyday life, and empathic concern, although moral attentiveness predicted need for cognition better than the FEC. Moreover, although both moral attentiveness and the FEC predicted rejection of causing outcome-maximizing harm in conventional sacrificial moral dilemmas, a process dissociation analysis revealed that moral attentiveness predicted reduced moral concerns about outcomes whereas the FEC predicted increased moral concerns about harm. Together, these findings suggest that the FEC scale improves upon past measures for capturing individual differences in moral considerations, and that chronic moral appraisal involves more than cognitive recognition of conflict.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the Department of Psychology in partial fulfillment of the requirements for the degree of Master of Science.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**January 28, 2019.

**NOTE (Keywords):**Focus on Ethical Considerations, moral attentiveness, moral identity, moral judgments, prosocial behavior

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Paul Conway, Professor Directing Thesis; Jon Maner, Committee Member; Colleen Ganley, Committee Member.

**SUBJECT:**Social psychology

**SUBJECT:**Personality

**DEGREE:**Masters

**Record number: 201**

**FILENAME:**VijayanNairRugminiamma\_fsu\_0071N\_15039.pdf

**TITLE:**Source Driven Rotating Flow in a Basin with Topography

**AUTHOR:**Vijayan Nair Rugminiamma, Linoj

**MEMBER (Professor Directing Thesis):**Speer, Kevin G. (Kevin George)

**MEMBER (Committee Member):**Tam, Christopher K. W.

**MEMBER (Committee Member):**Dewar, William K.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Earth, Ocean and Atmospheric Science

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (57 pages)

**ABSTRACT:**Laboratory experiments on a rotating tank of fluid are used to study the fundamental aspects of geophysical fluid flows. The present set of experiments are an attempt to study the effect of a rectangular ridge on the flow of a rotating fluid confined by lateral boundaries and forced by a source. First dye and later Particle Image Velocimetry (PIV) are used to understand the circulation in the domain. A strong southern boundary flow near the western wall of the domain and a cyclonic circulation in the trench are observed in these experiments. Overflow from the eastern side to the west of the ridge is seen along the N-S length of the ridge, though the overflow is pronounced near the northern boundary of the domain. Simplified mathematical models are used to describe the observed circulation. Numerical simulations are conducted using the MIT general circulation model on a large scale idealized box domain with a topography similar to the one we used in the laboratory tank as well as a rectangular trench parallel to the eastern wall of the domain. A point mass source contributes to the upwelling at the free surface. This set up represents a homogeneous abyssal layer upwelling slowly due to a polar source. Results indicate a cyclonic sense of circulation and a poleward eastern boundary current over the ridge wall. This intensification can be attributed to the vortex stretching over the slopes of the ridge, as the vertical walls appear in the numerical model as having a steep slope. Friction on vertical walls of the ridge are also a cause of this intensification. Some features of the observed and modeled circulation are compared to the oceanic flow in the deep Pacific Ocean.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the Department of Earth, Ocean and Atmospheric Science in partial fulfillment of the requirements for the degree of Master of Science.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 5, 2019.

**NOTE (Keywords):**Deep eastern boundary current, Numerical model, Particle image velocimetry, Topographic ridge, Trench, vorticity

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Kevin Speer, Professor Directing Thesis; Christopher Tam, Committee Member; William Dewar, Committee Member.

**SUBJECT:**Oceanography

**DEGREE:**Masters

**Record number: 202**

**FILENAME:**Vinson\_fsu\_0071E\_15046.pdf

**TITLE:**Modeling the Synchronous Behavior of Pancreatic Islets

**AUTHOR:**Vinson, Ryan M.

**MEMBER (Professor Directing Dissertation):**Bertram, R. (Richard)

**MEMBER (University Representative):**Miller, Brian G.

**MEMBER (Committee Member):**Jain, Harsh Vardhan

**MEMBER (Committee Member):**Magnan, Jeronimo Francisco, 1953-

**MEMBER (Committee Member):**Roper, Michael Gabriel

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Mathematics

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (193 pages)

**ABSTRACT:**Pancreatic islets of Langerhans are responsible for the release of the hormone insulin. This release is pulsatile, and proper insulin levels are necessary to maintain glucose homeostasis. In order to achieve the requisite insulin levels, the many islets of Langerhans must release the hormone in phase with one another. However, islets are not connected to each other in a physical way, so the cause of this synchronization is unclear. One hypothesis is that acetylcholine (ACh) release from intrapancreatic ganglia can give rise to these synchronized insulin signals. We test the nature of these ACh pulses, and find that their application need not be periodic to achieve synchronization. We also challenge previous results which suggest that ACh pulses may not be the underlying cause of synchronization, due to glucose's ability to override their effects. We find that the two chemical signals can not only coexist, but actually reinforce each other. Finally, we explore how islets may be able to maintain synchronicity through the effects of a coupling agent produced within the islets themselves.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Mathematics in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 8, 2019.

**NOTE (Keywords):**acetylcholine, islets, Langerhans, Modeling, ODE, pancreas

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Richard Bertram, Professor Directing Dissertation; Brian G. Miller, University Representative; Harsh Jain, Committee Member; Jerry Magnan, Committee Member; Michael Roper, Committee Member.

**SUBJECT:**Mathematics

**DEGREE:**Doctoral

**Record number: 203**

**FILENAME:**Violich\_fsu\_0071N\_15221.pdf

**TITLE:**The Deep-Sea Ecosystem: Assessment of the Biodiversity and Abundance of Deep-Water Fauna, in the Exuma Sound, Eleuthera, Bahamas, and the Northeastern Gulf of Mexico

**AUTHOR:**Violich, Mackellar A. (Mackellar Annalyse)

**MEMBER (Professor Directing Thesis):**Grubbs, R. Dean

**MEMBER (Committee Member):**Chanton, Jeffrey P.

**MEMBER (Committee Member):**Huettel, Markus

**MEMBER (Committee Member):**Brooks, Edward J.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Earth, Ocean and Atmospheric Science

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (135 pages)

**ABSTRACT:**The limited knowledge of the deep-sea is a paramount concern, affecting our ability to assess the overall health of the ocean’s ecosystem. Technology has made deep-sea fishing more accessible, but management plans cannot be implemented on ecosystems lacking fundamental information of the biology and species within them. Comprehensive ecological studies are needed to identify factors that may influence the distribution and abundance of the faunal groups that are becoming commercially relevant. This observational study was conducted over a 3-year period to provide an assessment of physical, environmental, and biological factors that drive benthic and benthopelagic community structure and function in Exuma Sound, the Bahamas. The use of deep-sea traps allowed the identification of the ecological community to the highest degree of taxonomy. A series of 115 deep-sea traps were sampled from 360 to 1480 meters deep from spring 2014 to spring 2017. During this study, two new species were discovered Booralana maxeyorum and Booralana sp. nov. Crustaceans dominated the catch (98%) with Teleosts (1.2%) and Elasmobranchs (0.1%) contributing the rest. Baited Remote Underwater Video Survey can also provide additional information about the ecosystem dynamics. The video surveys can help gather data on food availability and foraging behavior in the deep-sea. Baited video sampling will help describe the present conditions and distribution patterns in benthic communities of the deep-water of the Exuma Sound. The temperature might be a determining factor in the species that are present at different depths. A Total of 14 deep-sea BRUV surveys were conducted from depths of 651 to 1397 meters from fall 2013 to spring 2017. The BRUV recruited 22 different species within sample ranges of 651 to 1397 m, and 19 different families. Dominant taxa were Booralana sp., Bathynomus giganteus, Synaphobranchus sp., Simenchelys parasitica, Centrophorus sp., and Squalus cubenis. The deep-sea of the Gulf of Mexico are especially susceptible to anthropogenic influences due to location, abundant petrochemical resources, and easy access to fisheries. The magnitude and long term effects of these insults on the deep-sea are unknown. A more recent event, the Deepwater Horizon oil spill occurred on April 20th 2010 when methane gas erupted 1500 m below the surface northern Gulf of Mexico causing the most massive oil spill in US history. The benthic communities with acute damage have not been assessed for damage to the community structure and population size. A Total of 422 deep-sea sets were collected from depths of 184 to 2002 meters between April 2011 and April 2017. The total catch from the traps was 2898 individual animals, 1832 invertebrates from 27 species and 12 families. No benthic invertebrates were found in April 2011 and 2012 sampling immediately after the oil spill. There was a gradual increase in the subsequent years, with highest values in 2015. Then the CPUE tapered off in 2016 and 2017. The sampling was dominated by three species, Bathynomus giganteus (BGIG), Chaceon quinquedens (CQUI), Raymanninus shcmitti (RSCH). There is a preference to the geographic area which could be caused by access to nutrients, depth and sediment type. The more extended timescale measurements of impacts from the oil spill were evident to the most abundant invertebrate species.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Thesis submitted to the Department of Earth, Ocean and Atmospheric Science in partial fulfillment of the requirements for the degree of Master of Science.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 16, 2019.

**NOTE (Keywords):**Baited Remote Underwater survey, Deep-sea, Exuma Sound, Gulf of Mexico, Trapping

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**R. Dean Grubbs, Professor Directing Thesis; Jeffrey P. Chanton, Committee Member; Markus Huettel, Committee Member; Edward J. Brooks, Committee Member.

**SUBJECT:**Marine biology

**DEGREE:**Masters

**Record number: 204**

**FILENAME:**Waddles\_fsu\_0071E\_15170.pdf

**TITLE:**Just in Case You've Forgotten: A Historical and Analytical Survey of Thomas Whitfield and His Impact on Contemporary Gospel Music

**AUTHOR:**Waddles, Brandon C. (Brandon Christian)

**MEMBER (Professor Directing Dissertation):**Thomas, André J. (André Jerome), 1952-

**MEMBER (University Representative):**Anderson, Leon, (Drummer)

**MEMBER (Committee Member):**Fenton, Kevin

**MEMBER (Committee Member):**Bugaj, Kasia

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (122 pages)

**ABSTRACT:**This study details the historical relevance of Thomas Whitfield and his impact on contemporary gospel music. Through musical analysis, the document illustrates Whitfield’s innovations within the genre. Interviews with those who knew him, worked with him, and were influenced by his work assist the investigation in both fleshing out his historical background, as well as support the case for his lasting impact on gospel music.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the College of Music in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 5, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**André J. Thomas, Professor Directing Dissertation; Leon Anderson, University Representative; Kevin Fenton, Committee Member; Katarzyna "Kasia" Bugaj, Committee Member.

**SUBJECT:**Music--Instruction and study

**DEGREE:**Doctoral

**Record number: 205**

**FILENAME:**Walker\_fsu\_0071E\_15118.pdf

**TITLE:**Teachers' Sense of Self-Efficacy Scale in the Virtual Setting

**AUTHOR:**Walker, Reddick Russell, Jr.

**MEMBER (Professor Directing Dissertation):**Park, Toby J.

**MEMBER (University Representative):**Dennen, Vanessa P., 1970-

**MEMBER (Committee Member):**Gawlik, Marytza A., 1973-

**MEMBER (Committee Member):**Herrington, Carolyn D.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Education

**CORPORATE NAME:**Department of Educational Leadership and Policy Studies

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (126 pages)

**ABSTRACT:**What is interesting is virtual learning seems to go against the very nature of teachers and teaching. For example, many teachers are in the profession to change the lives of students, to have an impact, for interaction, to motivate and aspire students. Some teachers find that these are all diminished and even sometimes eliminated in the virtual environment. Given the expansion of K-12 virtual education across the United States, there is scarce evidence on virtual teachers’ and their acclimation to this setting. Therefore, the purposes of this study were twofold: i) identify and modify a scale for use in the virtual setting; and ii), analyze the data collected from virtual teachers to describe and explore their sense of self-efficacy. This exploratory study found that a group of virtual teachers had a moderately high sense of self-efficacy. T-tests revealed significant differences between teachers’ sense of self-efficacy scores and grade-level taught, content delivery, and prior participation in a virtual course. Multiple regression was used to show that virtual teaching experience (years), course content, and grade-level taught explained some of the variations in teachers’ sense of self-efficacy composite scores. Furthermore, teachers’ that incorporate synchronous and asynchronous lessons have a higher sense of self-efficacy than those that do not. In addition to providing evidence that supports the scale design and use, an unexpected finding emerged from this cross-sectional study: Teachers’ age had strong positive correlation with overall teaching experience but there was no correlation between age and years of virtual teaching experience. On average, research suggests that teaching experience, gained over a career, is positively associated with student achievement. Therefore, it seems plausible that the quality of virtual courses could vary widely due to variations in virtual teachers’ experience. With a better understanding of scale utilization, a profile of virtual teachers’ perceptions and points for future research, researchers and practitioners can enhance instructional practices.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Educational Leadership and Policy Studies in partial fulfillment of the requirements for the degree of Doctor of Education.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 12, 2019.

**NOTE (Keywords):**Teacher Engagement, Teacher self-efficacy, Virtual education

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Toby Park, Professor Directing Dissertation; Vanessa Dennen, University Representative; Marytza Gawlik, Committee Member; Carolyn Herrington, Committee Member.

**SUBJECT:**Educational evaluation

**SUBJECT:**Education and state

**SUBJECT:**Education

**DEGREE:**Doctoral

**Record number: 206**

**FILENAME:**Wang\_fsu\_0071E\_14943.pdf

**TITLE:**Current Control Strategies for Three-Phase Paralleled Sic Inverters

**AUTHOR:**Wang, Lu

**MEMBER (Professor Directing Dissertation):**Li, Hui, 1970-

**MEMBER (University Representative):**Clark, Jonathan E.

**MEMBER (Committee Member):**Lipo, T. A.

**MEMBER (Committee Member):**Steurer, Michael

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**FAMU-FSU College of Engineering

**CORPORATE NAME:**Department of Electrical and Computer Engineering

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2018

**PHYSICAL DESCRIPTION:**1 online resource (128 pages)

**ABSTRACT:**With more renewable energy integrated into the existing power consumption, power electronics play an important part to convert and control the power. Power inverters employ power semiconductors to converter DC into AC, which is an essential part in the renewable energy utilization. The paralleled transformer-less inverters are well adopted in the industry for large capacity grid-tie application. Compared with the centralized inverter, inverters in parallel can offer higher power rating, higher reliability, and lower grid-side current harmonics. Transformers are commonly used in the grid-tie system to provide galvanic isolation and voltage ratio transformations. Eliminating transformers will be a great benefit to further improve the system efficiency, reduce the size and weight. However, removal of the transformer would result in ground leakage current between the DC input side and the grid ground. The emerging wide band gap (WBG) devices are bringing significant opportunities for inverters towards higher efficiency and higher power density, due to their substantial switching loss reduction over Si devices. Silicon carbide (SiC) adoption also brings new control challenges to the three-phase paralleled transformer-less inverters. The voltage slew rate can be as high as dozens or hundreds of volts per nanosecond and the harmonic frequency related with the turning-on and turning-off of the devices may be up to several hundreds of mega-hertz, these high dv/dt and di/dt can generate high frequency EMI noise that propagates to the whole system including the power stage and control circuits, and raise the issue of increased electromagnetic interference (EMI). With high switching frequency, it is more difficult to control the circulating current among paralleled inverters. The conventional carrier synchronization method cannot be applied due to the impact of communication and sample delay. Limited controller resource also prevents sophisticated control algorithms. In this research, a five-level T-type (5LT2) PV inverter paralleled through inter-cell transformer (ICT) is presented to elaborate the challenges and demonstrate the advantages in three-phase SiC inverter. There are three key current in the 5LT2 PV inverter: circulating current, grid current, and ground leakage current. Circulating current is suppressed by the ICT and further controlled by a current controller. With increased switching frequency and multilevel topology, it is possible for a SiC device based grid connected converter to achieve filter-less function and utilize the grid impedance for its switching harmonic attenuation. Analysis shows that the conventional control method with instantaneous grid voltage feedforward (IGVF) will significantly limit the bandwidth or stability margin of a filter-less grid-connected inverter, thus make the inverter sensitive to grid disturbance. Two proposed grid voltage feedforward control methods, which require little additional computation resources, are presented to suppress the grid voltage disturbance. The increased switching efficiency is beneficial to the high frequency (HF) ground leakage current suppression, since the common mode (CM) choke can be much smaller. The 5LT2 inverter has a significant common mode voltage (CMV) reduction compared to that of a 3-level T-type (3LT2) inverter. However, the low frequency (LF) ground leakage current caused by neutral point (NP) voltage oscillation becomes a new issue in larger power rating multi-level inverters. A LF CMV compensation method is proposed to suppress the LF CMV. In this research, a control system is developed for a 60 kW three-phase paralleled transformer-less filter-less SiC PV inverter, which achieves a power density of 27 W/in3 and 3 kW/kg with nature convection, and measured peak efficiency of 99.2%.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Electrical and Computer Engineering in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Fall Semester 2018.

**NOTE (Date of Defense):**November 27, 2018.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Hui Li, Professor Directing Dissertation; Jonathan Clark, University Representative; Thomas A. Lipo, Committee Member; Michael Steurer, Committee Member.

**SUBJECT:**Electrical engineering

**DEGREE:**Doctoral

**Record number: 207**

**FILENAME:**WANG\_fsu\_0071E\_15077.pdf

**TITLE:**A Study of the Musical Style of Elliott Carter's Piano Sonata (1945-46) and of Mei-Fang Lin's Disintegration and Mistress of the Labyrinth

**AUTHOR:**Wang, Yingying

**MEMBER (Professor Directing Treatise):**Kalhous, David, 1975-

**MEMBER (University Representative):**Darrow, Alice-Ann

**MEMBER (Committee Member):**Dumlavwalla, Diana Teresa

**MEMBER (Committee Member):**Williams, Heidi Louise

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (78 pages)

**ABSTRACT:**The purpose of this treatise, which is in two parts, is to investigate piano solo works of Elliott Carter and Mei-Fang Lin. Part I of the treatise focuses on American composer Elliott Carter and his Piano Sonata (1945-46). Part II discusses contemporary Taiwanese composer Mei-Fang Lin and her two solo piano works, Disintegration and Mistress of the Labyrinth. Elliot Carter’s Piano Sonata is a representative example of his distinctive modernist style. After his early works written largely in Neoclassical idiom, Carter embarked on a new musical path in this work. His innovative approach to form, harmony, thematic design, metric elements, sound, and timing according to the common sonata structures differ significantly from the traditional approaches to this form. The compositional aesthetic of this work has become one of the hallmarks of American musical modernism, foreshadowing the compositional direction of piano sonatas in the latter half of the twentieth century. Carter’s music has known for his metrical complexity, in which metric modulation and polyrhythmic application largely emerged after 1948. The trademark is specifically launched in his Cello Sonata (1948). The 1945 piano sonata is the piece a few years earlier in which rhythmical complexity began to expose. In this treatise, I demonstrate the layer of rhythmical pulse through the method of thematic analysis, rather than merely focusing on metric modulation technique. In contrast to most scholarships that have a rigorous study for Carter’s eclectic deed on the fusion of European neoclassicism and American avant-garde, I discuss the composer’s new compositional approach in the Sonata. My analysis concentrates on specific innovative aspects that make the work unconventional, showing why Carter is one of the most important voices of American modernism. Part II of the treatise focuses on the contemporary Taiwanese composer Mei-Fang Lin’s two piano solo works, Disintegration and Mistress of the Labyrinth. Lin’s compositional aesthetic are intrinsically related to her educational background and cultural identity, and I show how this particular aesthetic is revealed in these two pieces. Lin’s musical language demonstrates a strong duality. On one hand, her European and American musical training imbued her music with an unmistakably Western voice. On the other hand, Lin’s studies of Eastern philosophy and traditional Chinese music infused her style with Eastern elements. My analysis illustrates how these two tendencies coexist in these two pieces.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Treatise submitted to the College of Music in partial fulfillment of the requirements for the degree of Doctor of Music.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 2, 2019.

**NOTE (Keywords):**Elliott Carter, Mei-Fang Lin, Modernism, Oriental Style, Sonata, Tonality

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**David Kalhous, Professor Directing Treatise; Alice Ann Darrow, University Representative; Diana Dumlavwalla, Committee Member; Heidi Williams, Committee Member.

**SUBJECT:**Music

**DEGREE:**Doctoral

**Record number: 208**

**FILENAME:**Wang\_fsu\_0071E\_15085.pdf

**TITLE:**Envelopes, Subspace Learning and Applications

**AUTHOR:**Wang, Wenjing

**MEMBER (Professor Co-Directing Dissertation):**Zhang, Xin

**MEMBER (Professor Co-Directing Dissertation):**Tao, Minjing

**MEMBER (University Representative):**Li, Wen, (Professor of Psychology)

**MEMBER (Committee Member):**Huffer, Fred W. (Fred William)

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Statistics

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (127 pages)

**ABSTRACT:**Envelope model is a nascent dimension reduction technique. We focus on extending the envelope methodology to broader applications. In the first part of this thesis we propose a common reducing subspace model that can simultaneously estimating covariance, precision matrices and their differences across multiple populations. This model leads to substantial dimension reduction and efficient parameter estimation. We explicitly quantify the efficiency gain through an asymptotic analysis. In the second part, we propose a set of new mixture models called CLEMM (Clustering with Envelope Mixture Models) that is based on the widely used Gaussian mixture model assumptions. The proposed CLEMM framework and the associated envelope-EM algorithms provides the foundations for envelope methodology in unsupervised and semi-supervised learning problems. We also illustrate the performance of these models with simulation studies and empirical applications. Also, we have extended the envelope discriminant analysis from vector data to tensor data in the third part of this thesis. Another study on copula-based models for forecasting realized volatility matrix is included, which is an important financial application of estimating covariance matrices. We consider multivariate-t, Clayton, and bivariate t, Gumbel, Clayton copulas to model and forecast one-day ahead realized volatility matrices. Empirical results show that copula based models can achieve significant performance both in terms of statistical precision and economical efficiency.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Statistics in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 18, 2019.

**NOTE (Keywords):**Clustering Analysis, Dimension Reduction, EM algorithm, Envelope models, Reducing subspace, Tensor classification

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Xin Zhang, Professor Co-Directing Dissertation; Minjing Tao, Professor Co-Directing Dissertation; Wen Li, University Representative; Fred Huﬀer, Committee Member.

**SUBJECT:**Statistics

**DEGREE:**Doctoral

**Record number: 209**

**FILENAME:**Wang\_fsu\_0071E\_15120.pdf

**TITLE:**A Bayesian Semiparametric Joint Model for Longitudinal and Survival Data

**AUTHOR:**Wang, Pengpeng

**MEMBER (Professor Co-Directing Dissertation):**Slate, Elizabeth H.

**MEMBER (Professor Co-Directing Dissertation):**Bradley, Jonathan R.

**MEMBER (University Representative):**Wetherby, Amy M.

**MEMBER (Committee Member):**Lin, Lifeng

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Statistics

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (112 pages)

**ABSTRACT:**Many biomedical studies monitor both a longitudinal marker and a survival time on each subject under study. Modeling these two endpoints as joint responses has potential to improve the inference for both. We consider the approach of Brown and Ibrahim (2003) that proposes a Bayesian hierarchical semiparametric joint model. The model links the longitudinal and survival outcomes by incorporating the mean longitudinal trajectory as a predictor for the survival time. The usual parametric mixed effects model for the longitudinal trajectory is relaxed by using a Dirichlet process prior on the coefficients. A Cox proportional hazards model is then used for the survival time. The complicated joint likelihood increases the computational complexity. We develop a computationally efficient method by using a multivariate log-gamma distribution instead of Gaussian distribution to model the data. We use Gibbs sampling combined with Neal's algorithm (2000) and the Metropolis-Hastings method for inference. Simulation studies illustrate the procedure and compare this log-gamma joint model with the Gaussian joint models. We apply this joint modeling method to a human immunodeciency virus (HIV) data and a prostate-specific antigen (PSA) data.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Statistics in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 16, 2019.

**NOTE (Keywords):**Bayesian, Gibbs Sampler, Joint model, Longitudinal, Survival

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Elizabeth H. Slate, Professor Co-Directing Dissertation; Jonathan R. Bradley, Professor Co-Directing Dissertation; Amy M. Wetherby, University Representative; Lifeng Lin, Committee Member.

**SUBJECT:**Statistics

**DEGREE:**Doctoral

**Record number: 210**

**FILENAME:**Ware\_fsu\_0071E\_15028.pdf

**TITLE:**The Effects of Beach and Species Management Actions on the Nesting and Incubation Environment of Sea Turtles in the Northern Gulf of Mexico

**AUTHOR:**Ware, Matthew

**MEMBER (Professor Directing Dissertation):**Fuentes, Mariana

**MEMBER (University Representative):**Miller, Thomas E., (Professor of Biological Science)

**MEMBER (Committee Member):**Chanton, Jeffrey P.

**MEMBER (Committee Member):**Burgess, Scott C

**MEMBER (Committee Member):**Grubbs, R. Dean

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Earth, Ocean and Atmospheric Science

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (145 pages)

**ABSTRACT:**Sandy beaches are unique environments which offer billions of dollars’ worth of ecosystem services, including among others: storm protection, sediment storage and transport, habitat space for beach-dwelling and nesting species, nutrient cycling, and tourism. Management of coastal systems tends to be anthropocentric – adjusting the coastal environment to suit the needs of human development and use. However, management actions can have important consequences for the natural functioning of these systems, particularly on the species who live or breed on sandy beaches. It is crucial that future management actions balance the economic, aesthetic, and recreational value of these ecosystems to coastal communities and their ecosystem services. Sea turtles offer an excellent case study in this balance. Changes to nesting or incubation conditions from anthropogenic alterations (e.g., artificial lighting, beach renourishment, marine debris) can result in the abandonment of nesting, suffocation or drowning of the embryos, increased feminization or hyperthermia, or death from exhaustion, desiccation, or predation. Understanding how the nesting and incubation environment may change under different beach- or species management actions is critical to ensuring their appropriate use in sea turtle population recovery. This dissertation investigated how two management actions affect the nesting and reproductive output of sea turtles: 1) sea turtle nest relocation (Chapter 2) including the assessment of inundation risk (Chapters 3 and 4) and 2) Leave No Trace ordinances (Chapter 5). Nest relocation is a common approach used to reduce losses due to inundation, erosion, poaching, and other terrestrial threats; however, there are concerns that this strategy may alter the incubating environment of the developing embryos, and thus affect proper hatchling development and fitness. In Chapter 2, I examined potential differences in inundation exposure, sand temperature, moisture content, and grain size between paired original-relocated nest sites as well as hatchling production between in situ and relocated nests. The incubating environment between original-relocated pairs were comparable, though relocation offered a minimal net benefit as it decreased emergence success and did not reduce the likelihood of inundation. More nests were being moved than are necessary, indicating additional information is needed to identify high-risk nesting sites. To better identify nests at-risk of wave exposure which are suitable for relocation, a wave runup model was developed using historical beach elevation, offshore wave, and tide data (Chapter 3). Wave runup modeling proved effective at identifying washed over nesting sites (83%). The best choice of beach slope used in the assessment varied depending on whether the user was interested in presence of wash-over or the frequency of wave wash-over at a site. An updated digital elevation model (DEM) was not necessary as the time-averaged DEM performed better than, or comparable to, those using the most recent LiDAR survey. A more complete understanding of sea turtle embryonic tolerance to inundation would improve high-risk site identification. HOBO U20L-04 water level loggers were tested in situ to evaluate their potential to provide this inundation tolerance information versus existing PVC-based equipment at paired experimental sites and when deployed adjacent to nests (Chapter 4). The HOBO loggers could provide high resolution observations of inundation frequency, duration, and severity which can inform nest productivity; however, their high cost will limit the scale of their deployment. In a complementary role, the low-cost PVC-based design can be mass-produced and deployed across a wide spatial scale but at a reduced data resolution – the balance between the use of these equipment will depend on the resources of the monitoring agency and the specific research question. Sea turtle population recovery is predicated not just on our ability to reduce losses of developing embryos, but on the continued availability of suitable nesting habitat itself. Leave No Trace ordinances are increasingly being used to combat the issue of marine debris including abandoned beach equipment (Chapter 5). Nesting success and obstructed crawl frequency were compared before and after the implementation of the ordinance at control and treatment beach segments in a BACIPS design. The ordinances had mixed success – though obstructed crawls did decline after the ordinance in Gulf Shores and Orange Beach, the presence of an obstruction did not influence a turtle’s decision to nest and nesting success declined after the ordinance across the study area due to natural variation. More time and/or increased compliance may be necessary for improvements in nesting success to materialize. These management actions appeared to have only small effects on sea turtle hatchling production and population growth rates in the northern Gulf of Mexico. But as charismatic megafauna and valuable ecosystem service providers, their continued conservation based on the provision of suitable environmental conditions serves as an important example of the need to balance anthropocentric coastal zone management with ecosystem function.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Earth, Ocean and Atmospheric Science in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 29, 2019.

**NOTE (Keywords):**endangered species conservation, inundation, Leave No Trace, marine debris, nest relocation, sea turtle

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Mariana M. P. B. Fuentes, Professor Directing Dissertation; Thomas E. (Tom) Miller, University Representative; Jeffrey P. Chanton, Committee Member; Scott Burgess, Committee Member; Dean Grubbs, Committee Member.

**SUBJECT:**Marine biology

**SUBJECT:**Wildlife conservation

**SUBJECT:**Environmental management

**DEGREE:**Doctoral

**Record number: 211**

**FILENAME:**Wells\_fsu\_0071E\_15124.pdf

**TITLE:**Better Dead than Red: A History of the Christian Crusade Aesthetic

**AUTHOR:**Wells, Daniel Eugene

**MEMBER (Professor Directing Dissertation):**Corrigan, John, 1952-

**MEMBER (University Representative):**Piehler, G. Kurt

**MEMBER (Committee Member):**McVicar, Michael J.

**MEMBER (Committee Member):**Drake, Jamil William

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Religion

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (421 pages)

**ABSTRACT:**In the early twentieth century America witnessed the emergence of a new form of political, social, and religious leader: the Christian anticommunist crusader. Crusaders fused patriotism, capitalism, conservative politics, theories of race and gender, and old-timey religion behind the façade of anticommunism. Crusaders believed themselves to be warriors in a cosmic battle between good and evil. Engaged in a social, political, economic, and religious war, they organized a militant campaign to drive out the influences of “godless communism” that they believed were threatening America. Politicians, businessmen, and religious leaders willingly adopted the title of “crusader” as a marker of their commitment to American liberty and opposition to communism. Each individual highlighted in this work adopted the title of “crusader.” Coalescing in a global crusade against communism, a network of crusaders and special interests produced a crusade aesthetic that haunted American culture well into the latter-half of the twentieth century. By surveying a diverse cast of anticommunists not often associated with one another, this project illustrates the complex, and often time incongruous, racially charged make-up of the crusade for Christ and against communism. The project analyzes the networks of Catholic radio priest Charles Coughlin, “hillbilly-type evangelist” Billy James Hargis, evangelical standard-bearer Billy Graham, president of The Church of Jesus Christ of Latter-Day Saints Ezra Taft Benson, and Black Panther Party Minister of Information Eldridge Cleaver. Instead of focusing exclusively on the intellectual productions, political alliances, or theological boundaries of these figures, this project focuses on their unifying aesthetic. Through the study of crusade aesthetics, this project expands the boundaries of the “Religious Right” and American conservatism by identifying the unifying meanings, sentiments, values, and varied principles that haunted American culture in the twentieth century. Knowledge, subjects, and objects are drawn together without necessarily being centered. The crusade, understood as a set of values, materials, and performance, is the aesthetic referenced throughout. As each chapter demonstrates, the crusade is accompanied by material traits of expression, the effects of which multiply as the crusade is imagined, produced, and performed. By untangling the frameworks of the crusade aesthetic, this project illustrates how the variation demonstrated in the diversity of crusaders is not a signal for separation, but evidence of the pervasive power of the aesthetic itself. Analyzing the aesthetics of the crusade broadens the historical categories while allowing room for the messy nature of history to unfold in a manner that demonstrates just how pervasive the crusade really was, or is. This project demonstrates the manner in which the crusade is the product of and unifying force throughout a chaotic assemblage of religion, politics, economics, maintaining distinct categories of race, gender and class. Though the crusade aesthetic assumed varied forms throughout the twentieth century there are five consistent principles that guide the crusade: “conservative” political and economic interest, anti-authoritarianism, the traditional white Christian-American family, a moral citizen subject, and a weaponized milieu of emotion (including fear, anger, sadness, trust/distrust, longing for community, nostalgia, anticipation of the “end times,” and others). Disseminated in mass via empires of print, television, radio, spoken word, interpersonal communication, and other material means, the crusade positioned itself at the center of conservative Christianity and politics. It united a tangled web of seemingly disparate persons, politics, economics, and intellectual trends by effacing difference under the banner of a Christian crusade against communism. Moreover, the crusade produced a cultural environment that defined what it meant to be a “true” Christian and American. Finally, the crusade motivated Americans to take personal action in defense of a Christian America founded squarely upon a divinely ordained capitalist economy.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Religion in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 15, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**John Corrigan, Professor Directing Dissertation; G. Kurt Piehler, University Representative; Michael J. McVicar, Committee Member; Jamil W. Drake, Committee Member.

**SUBJECT:**Religion

**DEGREE:**Doctoral

**Record number: 212**

**FILENAME:**Wells\_fsu\_0071E\_15167.pdf

**TITLE:**Degradation of Deepwater Horizon Oil Buried in Beach, Shelf and Slope Sediments of the Northeastern Gulf of Mexico

**AUTHOR:**Wells, Wm. Brian (William Brian)

**MEMBER (Professor Directing Dissertation):**Huettel, Markus

**MEMBER (University Representative):**Cooper, Bill

**MEMBER (Committee Member):**Chanton, Jeffrey P.

**MEMBER (Committee Member):**Chassignet, Eric P.

**MEMBER (Committee Member):**MacDonald, Ian R. (Ian Rosman)

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Earth, Ocean and Atmospheric Science

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (117 pages)

**ABSTRACT:**Polycyclic Aromatic Hydrocarbons (PAH) buried in sandy beaches of the northeastern Gulf of Mexico after the Deepwater Horizon accident posed a potential risk to environmental and human health. Therefore, concentrations and decay rates of the EPA’s 16 priority PAHs were determined in the supratidal area of the sandy beach at Pensacola Beach, Florida from 30 June 2010 through 16 June 2011. The results revealed no concentrations exceeding NOAA guidelines and decay to background concentrations within a year.The relatively rapid decay of the buried PAHs was facilitated by tidal pumping that maintained aerobic conditions within the beach sediment. Submerged-oil-mats (SOMs) that settled onto the seafloor in the northeast Gulf of Mexico were buried in the surface layers of the permeable inner shelf sands, which raised the question whether this embedded oil is preserved under anoxic conditions in the shelf sands despite their high permeability, and whether the sand layer covering the buried oil can effectively prevent release of potentially harmful petroleum hydrocarbons from the sediment. A set of laboratory flume experiments demonstrated that advective pore water flows, generated when bottom currents interact with the ripple topography of the sand bed, transports oxygen to and releases PAHs from the embedded oil to the water column. This process allows rapid aerobic decomposition of oil buried in the surface layers of permeable shelf sediment but also enhances the release of potentially harmful substances from this oil. Large phytoplankton blooms were associated with the Deepwater Horizon oil spill, and significant amounts of oil particles and algal cells settled in the form of marine snow onto northeastern Gulf of Mexico inner shelf and slope sediments. This raised the question how the metabolism of these sediments responded to this fossil and modern organic matter input and whether the combined input would affect the decomposition of the settled oil particles. Measurements of dissolved inorganic carbon, oxygen and nitrogen fluxes across the sediment-water interface at 5 to 20 m water depth and incubation of sediments retrieved from 310 m and 1000 m depth revealed how the seafloor at the different water depths responded to the experimental deposition of realistic amounts of phytoplankton, weathered oil particles, and a mixture of phytoplankton and oil particles. The permeable sand sediments and warmer temperatures of the inner shelf in general produced stronger absolute responses by the benthic microbial community, but the relative increases in sediment metabolism were higher in the muddy slope sediments. The results of this thesis research underline the role of oxygen, temperature and sediment composition for the decomposition of crude oil compounds that were deposited on shore, shelf and slope environments in the Gulf of Mexico. The findings emphasize the role of the transport mechanisms that facilitate aerobic microbial breakdown of the petroleum hydrocarbons. This research provides information to coastal managers and decision makers that can help when designing response plans to future oil spills in the Gulf of Mexico.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Earth, Ocean and Atmospheric Science in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 29, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Markus Huettel, Professor Directing Dissertation; Bill Cooper, University Representative; Jeffrey P. Chanton, Committee Member; Eric Chassignet, Committee Member; Ian MacDonald, Committee Member.

**SUBJECT:**Marine biology

**DEGREE:**Doctoral

**Record number: 213**

**FILENAME:**Whelan\_fsu\_0071N\_15208.pdf

**TITLE:**Training Parents in Multimodal Neurological Enhancement: A Survey of NICU Music Therapists

**AUTHOR:**Whelan, Madison L. (Madison Louise)

**MEMBER (Professor Directing Thesis):**Standley, Jayne M.

**MEMBER (Committee Member):**Gooding, Lori F. (Lori Fogus)

**MEMBER (Committee Member):**VanWeelden, Kimberly D.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (70 pages)

**ABSTRACT:**Training parents in Multimodal Neurological Enhancement (MNE) provides parents an opportunity for meaningful interaction with their infant, which has positive benefits for both the parent and the infant. However, little research exists that identifies current practices in providing parents training in MNE. Therefore, the purpose of this study was to investigate the training of parents of preterm infants in Multimodal Neurological Enhancement by music therapists. Invitations to participate in the study, including a link to the Qualtrics survey, were sent to 254 email addresses listed on the National Institute for Infant & Child Medical Music Therapy registry. For responses to be included for analysis, respondents had to consent to participate in the study, hold the credential MT-BC, have the designation NICU-MT, and have worked professionally within the NICU within the last 5 years. Thirty-four music therapists (15.59%) responded to the survey, but only 28 met inclusion criteria (N = 28). Eighteen participants (64%) reported providing parents training in MNE. Eighty-three percent of those 18 participants provided an average of 0-2 trainings per week. Responses indicate that while most NICU-MTs perceive parents to benefit from trainings, a number of barriers (institutional, personal, or having to do with parents) exist that impede implementation. Further results and implications for clinical practice are discussed within the paper.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the College of Music in partial fulfillment of the requirements for the degree of Master of Music.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 19, 2019.

**NOTE (Keywords):**Music Therapy, NICU, Parents, Training

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Jayne M. Standley, Professor Directing Thesis; Lori F. Gooding, Committee Member; Kimberly D. Van Weelden, Committee Member.

**DEGREE:**Masters

**Record number: 214**

**FILENAME:**White\_fsu\_0071E\_14834.pdf

**TITLE:**Redox and Coordination Chemistry Differences of the 4f and 5f Elements

**AUTHOR:**White, Frankie D.

**MEMBER (Professor Directing Dissertation):**Albrecht-Schmitt, Thomas E.

**MEMBER (University Representative):**Tabor, Samuel L.

**MEMBER (Committee Member):**Hanson, Kenneth G.

**MEMBER (Committee Member):**Hu, Yan-yan

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Chemistry and Biochemistry

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2018

**PHYSICAL DESCRIPTION:**1 online resource (119 pages)

**ABSTRACT:**This dissertation seeks to determine the differences in the lanthanides and later actinides in non-aqueous media. Research in the f-elements is significantly understudied compared to the other metals of the periodic table. Even more so are the later actinides which were largely unstudied for an extended period as it was believed later actinides were identical to lanthanides. A review by Neidig et al, “The Covalency in f-element Complexes” has ignited significant interest in the bonding of the actinides.1 A tremendous amount of research in the f-elements, particularly the actinides, has been performed in aqueous conditions at high temperatures and pressures. Chemistry under these conditions limit the research possible for lower oxidation states. Additionally, non-aqueous techniques allow for the investigation of these elements in more organic environments. The goal of this work is to pave a greater understanding of knowledge for lanthanides and actinides by examining their redox and coordination chemistries in these environments that could lead to applications other than nuclear energy and weapons. The first portion of this dissertation examines the chemistry that is already heavily acknowledged about f-elements: coordination chemistry. When modeling later actinides, a common notion is to utilize the isoelectronic lanthanide as the surrogate. Although for electronic comparisons this is useful, it is often not the case for examining isostructural compounds. The isoelectronic lanthanide is often smaller in ionic radius, which is a factor that dominates the chemistry of the lanthanides. Despite this, isolation of isostructural coordination compounds was obtained for the isoelectronic and size analogs of americium; europium and neodymium. This seemingly mundane study showed that americium portrays a small amount of covalency in its bonds which is not observed in the lanthanides. These small differences lead to profound changes in chemical properties as observed later in this work. The second portion of this work focuses on analyzing the divalent oxidation state of f-elements with crown ethers. The divalent oxidation state has been obtained for all lanthanides using potassium and 2.2.2-cryptand. The next step was to determine the extent to which crown ethers and solvents have on the redox properties of f-elements. Because all the lanthanides had been obtained in the divalent oxidation state in a similar matter, it was expected that the redox chemistries would behave identically. To surprise, ytterbium behaves differently and shows greater reversibility than the most stable divalent lanthanide, europium. Additionally, it was found that californium also behaves like ytterbium electrochemically, even though it would be expected to behave like samarium. It was proposed that this may be attributed to the 5f orbitals. The last of this work involves obtaining californium in the divalent oxidation state as a molecular system. This was done by modeling with samarium which is the most similar to californium in its redox and coordination properties. Quick and simple routes to synthesizing divalent samarium structures were obtained in ordinary glovebox conditions for attempts with californium. Under identical reaction conditions, isolation of Cf(II) crystals in the solid state were unsuccessful. However, interesting spectroscopic properties where observed that portrayed divalent californium as having tunable luminescence similar to divalent europium compounds. To our surprise, even though samarium resembles californium, the chemistry between the two elements are very different, further broadening the gap between the 4f and 5f elements.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Chemistry and Biochemistry in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Fall Semester 2018.

**NOTE (Date of Defense):**September 28, 2018.

**NOTE (Keywords):**Actinides, Californium and Americium, Coordination Chemistry, Divalent Samarium, Lanthanides, Redox Chemistry

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Thomas E. Albrecht-Schmitt, Professor Directing Dissertation; Samuel L. Tabor, University Representative; Kenneth G. Hanson, Committee Member; Yan-Yan Hu, Committee Member.

**SUBJECT:**Chemistry, Inorganic

**DEGREE:**Doctoral

**Record number: 215**

**FILENAME:**Whitehurst\_fsu\_0071E\_14837.pdf

**TITLE:**Health Politics in Cold War America, 1953 -1988

**AUTHOR:**Whitehurst, John Robert

**MEMBER (Professor Directing Dissertation):**Doel, Ronald Edmund

**MEMBER (University Representative):**Mesev, Victor

**MEMBER (Committee Member):**Frank, Andrew, 1970-

**MEMBER (Committee Member):**Blaufarb, Rafe

**MEMBER (Committee Member):**Gabriel, Joseph

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of History

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2018

**PHYSICAL DESCRIPTION:**1 online resource (230 pages)

**ABSTRACT:**Throughout American history, physicians and their close professional associates, including pharmacists, have been asked to participate in both public health and national security efforts. While these efforts are not inherently contradictory, some physicians within the medical community began to perceive them as such, especially following World War II. These physicians gave birth to an anti-nuclear “physicians’ movement” that challenged the notions of national security and used public health as a basis for doing so. They did this alongside two very important allies: natural scientists and concerned citizens, particularly middle-class women. This dissertation focuses on the two ways in which activist physicians were most directly tied to national security: as purveyors of information on the health effects of radiation (especially that resulting from nuclear testing) on people and the environment, and as participants in civil defense programs and exercises. Cold War physicians and pharmacists were expected to be the arbiters of information concerning the physical impacts of nuclear testing on Americans. Indeed, civil defense programs often described them as the “liaison” between the science community and the general public. Consequently, those within the “physicians’ movement” used their positions to challenge nuclear testing through medical activism. The Physicians for Social Responsibility (PSR), alongside various other anti-nuclear groups like the Women Strike for Peace (WSP) and Committee for Nuclear Information (CNI), presented information which contested the narratives of federal and state agencies, which often claimed that radioactive levels resulting from nuclear testing remained and would continue to remain safe for Americans. This challenge was largely manifest through the national conversation on the consequences of radioisotopes on public health, in particular Strontium 90 and Iodine 131. These radioisotopes fell from the skies in the form of fallout and worked their way back up food chains and into the American diet. This was especially disconcerting to young mothers, as infants and small children were particularly susceptible to these toxins. The “physicians’ movement” mobilized these radioisotopes and challenged civil defense throughout the early Cold War. Its leaders largely did so in the name of public health and were even credited by Kennedy’s science advisor, Jerome Wiesner, for their influence in garnishing American support for the passing of a Limited Test Ban Treaty (LTBT) in 1963. The LTBT was a monumental achievement of the anti-nuclear movement, as it eliminated atmospheric (above ground or aquatic) nuclear testing in both the United States and the Soviet Union. While underground nuclear testing continued, and other nations soon entered the nuclear club, this legislation greatly limited the two largest nuclear powers from further contaminating the global atmosphere to the degree that they had in the early Cold War. During the early Cold war, physicians and pharmacists were also expected to continue the tradition of supporting and preparing for war on the home front via civil defense exercises and practices. With civil defense administrators shifting their focus from conventional toward nuclear arsenals following World War II, they also began to predict the disproportionate destruction of physicians in post-war scenarios. Pharmacists and others within the medical community were being trained to take the place of these theoretically deceased physicians in preparation for a post-attack environment. The idea that pharmacists could replace physicians in a post-nuclear environment, as proposed by civil defense planners, alerted some physicians that something must be done. In response, the PSR participated in several congressional hearings, influenced the narratives of other anti-nuclear groups, funded anti-nuclear media, and fostered citizen-science projects in order to challenge notions of civil defense and nuclear testing in the name of public health. Medical activism, however, did not end with the signing of the LTBT. The PSR, in particular, only grew stronger as the Reagan Revolution and heightened Cold War tensions rose in the late 1970s and early 1980s. The PSR mutated from a local and national organization into an international participant in the Freeze movement and the anti-nuclear resurgence of the early 1980s. Medical activists again used many of the same methods they had relied on during the early Cold War period to challenge militarism such as professional journals, newspaper editorials, and popular media. They also began to use newer forms of media. In particular, the PSR funded the airing of several well-known and influential anti-nuclear films, like Day After and Threads, which challenged the foundations of civil defense throughout the 1980s. The story of Cold War medical activism illuminates the various tensions which have existed, and continue to exist, which are fundamental to balancing the necessities of national security with those of public health.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of History in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Fall Semester 2018.

**NOTE (Date of Defense):**October 8, 2018.

**NOTE (Keywords):**Civil Defense, Cold War, Medical Activism, National Security, Nuclear Testing, Public Health

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Ronald E. Doel, Professor Directing Dissertation; Victor Mesev, University Representative; Andrew Frank, Committee Member; Rafe Blaufarb, Committee Member; Joseph Gabriel, Committee Member.

**SUBJECT:**United States--History

**SUBJECT:**Public health

**SUBJECT:**Peace

**SUBJECT:**Study and teaching

**DEGREE:**Doctoral

**Record number: 216**

**FILENAME:**Wiggins\_fsu\_0071E\_15009.pdf

**TITLE:**The Choral Music of Joachim Raff (1822–1882)

**AUTHOR:**Wiggins, Jeremy Kenneth

**MEMBER (Professor Directing Dissertation):**Thomas, André J. (André Jerome), 1952-

**MEMBER (University Representative):**Stebleton, Michelle

**MEMBER (Committee Member):**Fenton, Kevin

**MEMBER (Committee Member):**Fredrickson, William E.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (169 pages)

**ABSTRACT:**Joachim Raff (1822–1882), known mainly for his symphonic works, composed a significant amount of choral music, which includes seventeen choral-orchestral works, fifty part-songs, six a cappella motets, and other incidental choral music. Raff was well respected as a composer in the second half of the nineteenth century, but performances of Raff’s works declined sharply after the turn of the twentieth century. To date, no dissertations or other publications exist that discuss Raff’s contributions to the choral oeuvre. The purpose of this dissertation is to examine Joachim Raff’s life and to provide historical, contextual, stylistic, musical, and idiosyncratic elements of each of Raff’s available choral works. This study divides the analysis of the choral works into two chapters: one chapter for his works for unaccompanied and a cappella chorus, and another chapter that covers his works for chorus and orchestra. In addition to providing a general analysis, the discussion offers insight into the accessibility level of each work. The conclusions of this study are that the choral music of Joachim Raff spans multiple genres and styles, and that it offers accessibility to a variety of choirs. As a resource for those wishing to study or perform choral works by Raff, this document also contains a catalog of his choral works, which provides information on voicing, orchestration, and publication.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the College of Music in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 12, 2019.

**NOTE (Keywords):**choral, choral-orchestral, choral repertoire, Joachim Raff, oratorio, part-song

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**André J. Thomas, Professor Directing Dissertation; Michelle Stebleton, University Representative; Kevin Fenton, Committee Member; William Fredrickson, Committee Member.

**SUBJECT:**Music--Instruction and study

**DEGREE:**Doctoral

**Record number: 217**

**FILENAME:**Wilson\_fsu\_0071E\_15179.pdf

**TITLE:**An Original Band Composition: Including a Guide for Creating Instructional Materials Based on Performance Literature

**AUTHOR:**Wilson, Chandler L. (Chandler LeRoy)

**MEMBER (Professor Directing Dissertation):**Clary, Richard

**MEMBER (University Representative):**Anderson, Leon, (Drummer)

**MEMBER (Committee Member):**Dunnigan, Patrick, 1957-

**MEMBER (Committee Member):**Madsen, Clifford K.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (148 pages)

**ABSTRACT:**The purpose of this project was to create an original band composition, a five-movement suite, for upper high school and university-level ensembles that would provide students, teachers, and audiences an enjoyable experience. Along with the composition, Suite Forty-four, a series of exercises that present musical concepts from the first four movements of the work is also included. These exercises consist of warm-ups, melodic exercises, harmonic studies, articulation studies, rhythmic studies, style exercises with dynamics, intonation, and meter studies that are specific to each of the first four movements, and in some cases to the suite as a whole.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the College of Music in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 18, 2019.

**NOTE (Keywords):**Chandler Wilson, Concert Band, Musical Concepts, Music Education, Music Teacher, Warm-Ups

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Richard Clary, Professor Directing Dissertation; Leon Anderson, University Representative; D. Patrick Dunnigan, Committee Member; Clifford Madsen, Committee Member.

**SUBJECT:**Music--Instruction and study

**DEGREE:**Doctoral

**Record number: 218**

**FILENAME:**Worm\_fsu\_0071E\_15062.pdf

**TITLE:**Embodied Experiences in the Online Writing Center

**AUTHOR:**Worm, Anna Marie

**MEMBER (Professor Directing Dissertation):**Fleckenstein, Kristie S.

**MEMBER (University Representative):**Jeong, Allan C.

**MEMBER (Committee Member):**Graban, Tarez Samra

**MEMBER (Committee Member):**Neal, Michael R.

**MEMBER (Committee Member):**McElroy, Stephen J.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of English

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (205 pages)

**ABSTRACT:**This dissertation responds to several overlapping exigencies. First, online writing instruction is on the rise, and with that rise comes a need for substantive research into methods of online writing support. Writing center scholarship has attempted to keep pace with the growth of OWI; however, stakeholders in online writing instruction, such as the Global Society of Online Literacy Educators (2019), suggest that the field needs further sustained and substantive work, both theoretical and empirical, including the “disembodiment of the [online writing classroom].” This leads to the second exigency: embodiment, the unified experience of mind, body, and environment, has been demonstrated to be an important consideration for digital technology and online communication, digital composition studies, and writing centers. Because these interests intersect in the online writing center, the online writing center is a necessary site of such examination. Thus, this dissertation asks how embodiment manifests in the online writing center for tutors, the practitioners in the space. Specifically, it examines the following questions through a multiple-case study of three tutors in an audio-video-textual tutoring setting: 1) How, if at all, does technological mediation, including matters of interface and the presence of the mediated bodies of student clients, impact tutors’ experiences? 2) How, if at all, do tutors consciously represent their bodies, desire their bodies to be understood, and understand the student clients’ bodies during online tutoring sessions? 3) How, if at all, do tutors’ embodiments, including embodied acts and experiences, manifest in and affect online tutoring sessions? This study finds that, first, for these online writing tutors, place and embodied habits were primary components of the ways in which tutor embodiment shaped and was shaped by their experiences with the technological mediation of the tutoring sessions. Second, tutors desired visible bodies in their representations of self; bodies were a way for tutors to cultivate a sense of authenticity in the appointment, to develop a professional ethos, and to assess the ongoing effectiveness of the session. The final way tutors’ embodied experiences manifested in the online tutoring center was that tutors experienced anxiety regarding the material spaces from which they tutored online. Despite often being invisible outside of breakdown, embodiment is an essential part of the constellation of effective online writing support practices. As a result, it requires not only further theoretical study in online writing center practices but also further integration into tutor preparation.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of English in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 29, 2019.

**NOTE (Keywords):**audio-visual-textual tutoring, composition studies, embodiment, online writing center, online writing instruction, writing center

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Kristie S. Fleckenstein, Professor Directing Dissertation; Allan Jeong, University Representative; Tarez Samra Graban, Committee Member; Michael Neal, Committee Member; Stephen J. McElroy, Committee Member.

**SUBJECT:**Rhetoric

**DEGREE:**Doctoral

**Record number: 219**

**FILENAME:**Worts\_fsu\_0071E\_15044.pdf

**TITLE:**Safety and Efficacy of Sub-Maximal Aerobic Exercise during the Sub-Acute Phase of Recovery Following Sport-Related Concussion

**AUTHOR:**Worts, Phillip R.

**MEMBER (Professor Directing Dissertation):**Kim, Jeong-Su

**MEMBER (University Representative):**Levenson, Cathy W.

**MEMBER (Committee Member):**Panton, Lynn B. (Lynn Biship)‏

**MEMBER (Committee Member):**Ormsbee, Michael J.

**MEMBER (Committee Member):**Burkhart, Scott O.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Human Sciences

**CORPORATE NAME:**Department of Nutrition, Food and Exercise Sciences

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (187 pages)

**ABSTRACT:**Previous research suggests that strict rest following a concussion may prolong symptom presentation, but rest is still one of the most common treatments. Aerobic exercise has effectively reduced symptom burden and exercise intolerance in patients experiencing persistent symptoms longer than 30 days; however, treatment outcomes with sub-acutely concussed patients have not been described. PURPOSE: The purpose of this study was to (1) demonstrate the systemic dysfunction following a sport-related concussion; and (2) examine the safety and efficacy of a 20-minute, low- or moderate-intensity (40% or 60% of HRMAX) controlled treadmill aerobic exercise as a therapeutic modality to improve cardioautonomic, neurological, and psychological function. METHODS: Thirty participants [16.0 ± 1.3 years; 19 sport-related concussed (SRC) and 11 healthy, non-concussed (NC)] were assigned to one of three treatments [1) 40% Age-Predicted HRMAX; 2) 60% Age-Predicted HRMAX; or 3) seated rest using a randomized double block design. SRC participants were evaluated between Day 3-7 of their injury and performed the treatment on the same day. Serial monitoring was performed at rest, during the acute bout of exercise, and recovery. The SRC participants were tracked until clinical recovery. RESULTS: Demographic variables were no different across groups. Autonomic function was not different across groups. Diastolic blood pressure and mean arterial pressure were significantly higher in the SRC participants. A greater percentage of exercising SRC participants improved on measures of ocular motor and vestibular function and symptom reporting compared to the resting SRC participants. 100% of the 40% HRMAX SRC participants and 86% of the 60% HRMAX SRC participants completed the session. Student-athletes who were prescribed exercise following their initial visit reported approximately five days faster than those who were prescribed rest in a previous clinical dataset. CONCLUSIONS: The 40% treatment reported 100% completion rates while both the 40% and 60% groups improved symptoms. Future studies should seek to examine middle school, collegiate, and professional athletes as well as non-athlete populations.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Nutrition, Food and Exercise Sciences in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 28, 2019.

**NOTE (Keywords):**active rehabilitation, aerobic exercise, recovery, sport-related concussion, sub-acute, therapeutic exercise

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Jeong-Su Kim, Professor Directing Dissertation; Cathy W. Levenson, University Representative; Lynn B. Panton, Committee Member; Michael J. Ormsbee, Committee Member; Scott O. Burkhart, Committee Member.

**SUBJECT:**Physiology

**SUBJECT:**Medical sciences

**SUBJECT:**Physical therapy

**DEGREE:**Doctoral

**Record number: 220**

**FILENAME:**Wu\_fsu\_0071E\_15252.pdf

**TITLE:**Promoting Behavioral Intentions to Defend Victims of Bullying among College Students with an Interactive Narrative Game

**AUTHOR:**Wu, Yijie

**MEMBER (Professor Directing Dissertation):**Arpan, Laura M.

**MEMBER (University Representative):**Boot, Walter Richard

**MEMBER (Committee Member):**Raney, Arthur A.

**MEMBER (Committee Member):**Lustria, Mia Liza A.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Communication and Information

**CORPORATE NAME:**School of Communication

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (190 pages)

**ABSTRACT:**Bullying and cyberbullying nowadays have become an issue that a substantial number of college students have to deal with. However, most people do not think they occur as frequently in universities as in high schools or middle schools, and few of them are willing to intervene in a bullying situation when they see one. The goal of this dissertation was to explore ways to promote victim defending behaviors among college students from two perspectives: 1) to examine the psychological and personal factors that determine college students’ behavioral intentions to help victims and 2) to investigate the effects of playing an anti-bullying interactive narrative game on behavioral intention to help victims. To fulfill this goal, two studies – one survey and one experiment – were designed. The first study was a survey to examine psychological factors (i.e., attitude, self-efficacy, injunctive norms, descriptive norms, and personal moral norms) and personal factors (i.e., age, gender, and trait empathy) that might influence behavioral intention to defend victims of bullying. Results from Study 1 showed that psychological factors like injunctive norms perceptions, self-efficacy, and personal moral norms regarding victim defending behaviors as well as personal factors including age, gender, and trait empathy can influence a college student’s intention to help victims of bullying. Following this, an experiment was conducted using a mixed 2 (Medium of Intervention: Interactive narrative game/Non-interactive narrative video) × 2 (Outcome Valence: Positive/Negative) × 2 (Time: Pre-test/Post-test) factorial design with an additional control group. The experiment investigated whether medium of intervention and outcome valence influenced college students’ behavioral intention to defend bullied victims through the mechanisms of presence, identification, counterfactual thinking, and guilt. Results from Study 2 showed that playing an anti-bulling interactive narrative game, Life is Strange, increased college students’ intention to defend victims of bullying due to its ability to facilitate internal ascription of responsibility, personal moral norms for victim defending, and empathy for victims through evoking players’ strong sense of presence in the game. Experiencing a negative outcome in the game also increased intention to help victims later via players’ feeling of guilt. These results and their implications are discussed.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the School of Communication in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 15, 2019.

**NOTE (Keywords):**bullying, experiment, interactive narrative, survey, video games

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Laura Arpan, Professor Directing Dissertation; Walter Richard Boot, University Representative; Arthur Raney, Committee Member; Mia Lustria, Committee Member.

**SUBJECT:**Communication

**DEGREE:**Doctoral

**Record number: 221**

**FILENAME:**Xiao\_fsu\_0071E\_15172.pdf

**TITLE:**Univariate and Multivariate Volatility Models for Portfolio Value at Risk

**AUTHOR:**Xiao, Jingyi

**MEMBER (Professor Directing Dissertation):**Niu, Xufeng

**MEMBER (University Representative):**Ökten, Giray

**MEMBER (Committee Member):**Wu, Wei

**MEMBER (Committee Member):**Huffer, Fred W. (Fred William)

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Statistics

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (91 pages)

**ABSTRACT:**In modern day financial risk management, modeling and forecasting stock return movements via their conditional volatilities, particularly predicting the Value at Risk (VaR), became increasingly more important for a healthy economical environment. In this dissertation, we evaluate and compare two main families of models for the conditional volatilities - GARCH and Stochastic Volatility (SV) - in terms of their VaR prediction performance of 5 major US stock indices. We calculate GARCH-type model parameters via Quasi Maximum Likelihood Estimation (QMLE) while for those of SV we employ MCMC with Ancillary Sufficient Interweaving Strategy. We use the forecast volatilities corresponding to each model to predict the VaR of the 5 indices. We test the predictive performances of the estimated models by a two-stage backtesting procedure and then compare them via the Lopez loss function. Results of this dissertation indicate that even though it is more computational demanding than GARCH-type models, SV dominates them in forecasting VaR. Since financial volatilities are moving together across assets and markets, it becomes apparent that modeling the volatilities in a multivariate framework of modeling is more appropriate. However, existing studies in the literature do not present compelling evidence for a strong preference between univariate and multivariate models. In this dissertation we also address the problem of forecasting portfolio VaR via multivariate GARCH models versus univariate GARCH models. We construct 3 portfolios with stock returns of 3 major US stock indices, 6 major banks and 6 major technical companies respectively. For each portfolio, we model the portfolio conditional covariances with GARCH, EGARCH and MGARCH-BEKK, MGARCH-DCC, and GO-GARCH models. For each estimated model, the forecast portfolio volatilities are further used to calculate (portfolio) VaR. The ability to capture the portfolio volatilities is evaluated by MAE and RMSE; the VaR prediction performance is tested through a two-stage backtesting procedure and compared in terms of the loss function. The results of our study indicate that even though MGARCH models are better in predicting the volatilities of some portfolios, GARCH models could perform as well as their multivariate (and computationally more demanding) counterparts.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Statistics in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 2, 2019.

**NOTE (Keywords):**GARCH, MGARCH, SV, VaR

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Xufeng Niu, Professor Directing Dissertation; Giray Okten, University Representative; Fred Huﬀer, Committee Member; Wei Wu, Committee Member.

**SUBJECT:**Statistics

**DEGREE:**Doctoral

**Record number: 222**

**FILENAME:**Xu\_fsu\_0071E\_14994.pdf

**TITLE:**Impact of Violations of Measurement Invariance in Longitudinal Mediation Modeling

**AUTHOR:**Xu, Jie

**MEMBER (Professor Co-Directing Dissertation):**Yang, Yanyun

**MEMBER (Professor Co-Directing Dissertation):**Zhang, Qian

**MEMBER (University Representative):**Huffer, Fred W. (Fred William)

**MEMBER (Committee Member):**Becker, Betsy J.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Education

**CORPORATE NAME:**Department of Educational Psychology and Learning Systems

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (126 pages)

**ABSTRACT:**Research has shown that cross-sectional mediation analysis cannot accurately reflect a true longitudinal mediated effect. To investigate longitudinal mediated effects, different longitudinal mediation models have been proposed and these models focus on different research questions related to longitudinal mediation. When fitting mediation models to longitudinal data, the assumption of longitudinal measurement invariance is usually made. However, the consequences of violating this assumption have not been thoroughly studied in mediation analysis. No studies have examined issues of measurement non-invariance in a latent cross-lagged panel mediation (LCPM) model with three or more measurement occasions. The goal of the current study is to investigate the impact of violations of measurement invariance on longitudinal mediation analysis. The focal model in the study is the LCPM model suggested by Cole and Maxwell (2003). This model can be used to examine mediated effects among the latent predictor, mediator, and outcome variables across time. In addition, it can account for measurement error and allow for the evaluation of longitudinal measurement invariance. Simulation methods were used and the investigation was performed using population covariance matrices and sample data generated under various conditions. Eight design factors were considered for data generation: sample size, proportion of non-invariant items, position of latent factors with non-invariant items, type of non-invariant parameters, magnitude of non-invariance, pattern of non-invariance, size of the direct effect, and size of the mediated effect. Results from population investigation were evaluated based on overall model fit and the calculated direct and mediated effects; results from finite sample analysis were evaluated in terms of convergence and inadmissible solutions, overall model fit, bias/relative bias, coverage rates, and statistical power/type I error rates. In general, results obtained from finite sample analysis were consistent with those from the population investigation, with respect to both model fit and parameter estimation. The type I error rate of the mediated effects was inflated under the non-invariant conditions with small sample size (200); power of the direct and mediated effects was excellent (1.0 or close to 1.0) across all investigated conditions. Type I error rates based on the chi-square statistic test were seriously inflated under the invariant conditions, especially when the sample size was relatively small. Power for detecting model misspecifications due to longitudinal non-invariance was excellent across all investigated conditions. Fit indices (CFI, TLI, RMSEA, and SRMR) were not sensitive in detecting misspecifications caused by violations of measurement invariance in the investigated LCPM model. Study results also showed that as the magnitude of non-invariance, the proportion of non-invariant items, and the number of positions of latent variables with non-invariant items increased, estimation of the direct and mediated effects tended to be less accurate. The decreasing pattern of change in item parameters over measurement occasions resulted in the least accurate estimates of the direct and mediated effects. Parameter estimates were fairly accurate under the conditions of the decreasing and then increasing pattern and the mixed pattern of change in item parameters. Findings from this study can help empirical researchers better understand the potential impact of violating measurement invariance on longitudinal mediation analysis using the LCPM model.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Educational Psychology and Learning Systems in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 6, 2019.

**NOTE (Keywords):**invariance, longitudinal, measurement, modeling, statistics

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Yanyun Yang, Professor Co-Directing Dissertation; Qian Zhang, Professor Co-Directing Dissertation; Fred W. Huffer, University Representative; Betsy J. Becker, Committee Member.

**SUBJECT:**Educational tests and measurements

**SUBJECT:**Statistics

**DEGREE:**Doctoral

**Record number: 223**

**FILENAME:**Xu\_fsu\_0071E\_15078.pdf

**TITLE:**Survival Analysis Using Bayesian Joint Models

**AUTHOR:**Xu, Zhixing

**MEMBER (Professor Directing Dissertation):**Sinha, Debajyoti

**MEMBER (University Representative):**Schatschneider, Christopher

**MEMBER (Committee Member):**Bradley, Jonathan R.

**MEMBER (Committee Member):**Chicken, Eric, 1963-

**MEMBER (Committee Member):**Lin, Lifeng

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Statistics

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (68 pages)

**ABSTRACT:**In many clinical studies, each patient is at risk of recurrent events as well as the terminating event. In Chapter 2, we present a novel latent-class based semiparametric joint model that offers clinically meaningful and estimable association between the recurrence profile and risk of termination. Unlike previous shared-frailty based joint models, this model has a coherent interpretation of the covariate effects on all relevant functions and model quantities that are either conditional or unconditional on events history. We offer a fully Bayesian method for estimation and prediction using a complete specification of the prior process of the baseline functions. When there is a lack of prior information about the baseline functions, we derive a practical and theoretically justifiable partial likelihood based semiparametric Bayesian approach. Our Markov Chain Monte Carlo tools for both Bayesian methods are implementable via publicly available software. Practical advantages of our methods are illustrated via a simulation study and the analysis of a transplant study with recurrent Non-Fatal Graft Rejections (NFGR) and the termination event of death due to total graft rejection. In Chapter 3, we are motivated by the important problem of estimating Daily Fine Particulate Matter (PM2.5) over the US. Tracking and estimating Daily Fine Particulate Matter (PM2.5) is very important as it has been shown that PM2.5 is directly related to mortality related to the lungs, cardiovascular system, and stroke. That is, high values of PM2.5 constitute a public health problem in the US, and it is important that we precisely estimate PM2.5 to aid in public policy decisions. Thus, we propose a Bayesian hierarchical model for high-dimensional ``multi-type" responses. By ``multi-type" responses we mean a collection of correlated responses that have different distributional assumptions (e.g., continuous skewed observations, and count-valued observations). The Centers for Disease Control and Prevention (CDC) database provides counts of mortalities related to PM2.5 and daily averaged PM2.5 which are treated as responses in our analysis. Our model capitalizes on the shared conjugate structure between the Weibull (to model PM2.5), Poisson (to model diseases mortalities), and multivariate log-gamma distributions, and use dimension reduction to aid with computation. Our model can also be used to improve the precision of estimates and estimate at undisclosed/missing counties. We provide a simulation study to illustrate the performance of the model and give an in-depth analysis of the CDC dataset.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Statistics in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 19, 2019.

**NOTE (Keywords):**Bayesian analysis, Frality, Joint Model, Multi-type responses, Recurrent events, Spatial survival analysis

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Debajyoti Sinha, Professor Directing Dissertation; Chris Schatschneider, University Representative; Jonathan R. Bradley, Committee Member; Eric Chicken, Committee Member; Lifeng Lin, Committee Member.

**SUBJECT:**Statistics

**SUBJECT:**Biometry

**SUBJECT:**Public health

**DEGREE:**Doctoral

**Record number: 224**

**FILENAME:**Yazbec\_fsu\_0071E\_14683.pdf

**TITLE:**Factors Underlying Conceptual Change in the Sciences and Social Sciences

**AUTHOR:**Yazbec, Angele

**MEMBER (Professor Directing Dissertation):**Kaschak, Michael P.

**MEMBER (University Representative):**Wood, Carla

**MEMBER (Committee Member):**Borovsky, Arielle

**MEMBER (Committee Member):**Boot, Walter Richard

**MEMBER (Committee Member):**Schatschneider, Christopher

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Psychology

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (60 pages)

**ABSTRACT:**Learning in the sciences is difficult for students from elementary school to university due to misconceptions, or incorrect prior knowledge, interfering with the acquisition of new knowledge. The process of replacing previously incorrect ideas with new and accurate ones is referred to as conceptual change. Which factors and to what extent they facilitate the conceptual change is debated. This study primarily investigates two key components to conceptual change in scientific knowledge: text style and epistemic beliefs. We also explored additional contributions of individual differences in prior knowledge, reading ability, and working memory. 157 college students completed a two-part, within subjects design study in which they completed pretests, read passages addressing a misconception, completed posttests, and were assessed on a battery of the individual difference measures. We noted conceptual change on the posttest, but individual readers appeared to respond to the text differently.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Psychology in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 1, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Michael Kaschak, Professor Directing Dissertation; Carla Wood, University Representative; Arielle Borovsky, Committee Member; Walter Richard Boot, Committee Member; Christopher Schatschneider, Committee Member.

**SUBJECT:**Psychology

**DEGREE:**Doctoral

**Record number: 225**

**FILENAME:**Yeh\_fsu\_0071E\_15005.pdf

**TITLE:**Effects of Multi-Ingredient Dietary Supplementation and Tai Chi on Cognitive and Physical Function in Middle-Aged and Older Individuals

**AUTHOR:**Yeh, Ming-Chia (Mingchia)

**MEMBER (Professor Directing Dissertation):**Kim, Jeong-Su

**MEMBER (University Representative):**Contreras, Robert J.

**MEMBER (Committee Member):**Panton, Lynn B. (Lynn Biship)‏

**MEMBER (Committee Member):**Ormsbee, Michael J.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Human Sciences

**CORPORATE NAME:**Department of Nutrition, Food and Exercise Sciences

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (193 pages)

**ABSTRACT:**Introduction. Aging involves in a series of deterioration including: brain shrinkage (e.g. loss of neurons and plasticity) and declines in cognitive and physical functions (e.g. memory loss, reduced gait and balance, and loss of muscle mass and strength). Long-term exercise training and dietary supplementation have been shown to attenuate and improve these age-related declines in cognitive and physical functions in older individuals. A commercially available multi-ingredient dietary supplement, MindWorks® (Shaklee, CA), consists of vitamins B6, vitamin B12, folate, chardonnay grape extract, guarana extract, blueberry powder and green coffee extract, all of which have been reported to maintain or improve in brain function, cognition, cardiovascular function, and gait speed in older adults; however, existing results in human studies remain inconsistent. Another therapeutic intervention such as Tai Chi exercise has been shown to improve cognitive performance (e.g. short-term memory, working memory, and semantic memory), and physical function (e.g. gait, balance, flexibility, and blood pressure) in older adults although the underlying mechanisms are undetermined. The main objective of the present study was to demonstrate the impact of MindWorks® supplementation on cognitive and physical functions in middle-aged and older healthy individuals in comparison to a placebo (as negative control) and Tai Chi exercise (as positive control). The central hypothesis was that MindWorks® supplementation and Tai Chi exercise would improve cognitive and physical functions in middle-aged and older individuals compared to placebo group. Specific aim 1 was to examine the extent to which 12 weeks of MindWorks® supplementation and Tai Chi training would differentially affect cognitive function by measuring animal naming test (ANT) and digital span test (forward digit span, FDS, and backward digit span, BDS), and physical function by measuring Tandem Romberg test, single leg stance (SLS) test, dynamic balance test via the Biodex Balance System (BBS), timed up and go test (TUG), and functional reach test (FRT) in middle-aged and older individuals in comparison to placebo. Specific aim 2 was to determine the degree to which 12 weeks of MindWorks® supplementation and Tai Chi training would improve blood pressure, heart rate (HR), and blood biomarkers known to be involved in the pathogenesis of cognitive and cardiovascular dysfunction including homocysteine, vitamins B6, vitamin B12, folic acid, brain-derived neurotrophic factor (BDNF), and nitric oxide (NO). Methods. This was a randomized, double-blind, placebo-controlled study. Healthy middle-aged and older men and postmenopausal women (45-75 years old, N=75) were randomly assigned to one of three experimental groups: 1) MindWorks® supplementation (MW), 2) placebo tablet supplementation (PL), or 3) Tai Chi training (EX). The participants in the supplementation group took 1 tablet daily (MindWorks® or placebo) with a meal in the morning for 12 weeks. The participants in the Tai Chi group performed the simplified 24-form Yang Tai Chi exercise program (3x/week) for 12 weeks. Dependent variables were measured at pre- and post-intervention time points to investigate changes in cognitive, physical, and cardiovascular functions, and cognitive and cardiovascular related biomarkers. Data were analyzed using a 3×2 (treatment by time) mixed ANOVA followed by Bonferroni post-hoc analyses when a significant F value was observed. Results. EX group showed significant improvements in physical function measures at pre- and post-intervention time points in SLS test (+43.13%, p= 0.025), BBS dynamic test level 2 anterior/posterior scores (+58.43% improvement, p= 0.001), and TUG test (-14%, p< 0.001). MW group showed a significantly increase in BDNF levels after 12-week supplementation (+33.07%, p= 0.004). Both MW and EX group had significantly improved physical health scores (PHS) in SF-36 survey (MW: +5.05%, p= 0.035; EX: +9.04%, p= 0.009) after the interventions. Additionally, comprehensive falls risk screening instrument (CFRSI) revealed that participants in all three groups were at low risk of falls category at pre- and post-intervention time points. Three-day food record revealed participants in all three groups had sufficient vitamin B6, B12, folic acid consumption at pre- and post-intervention time points. Conclusion. The 12 weeks of multi-ingredient dietary (MindWorks®) supplementation and Tai Chi training were beneficial to middle-aged and older adults on different cognitive and physical function domains with improved self-perception of health status. While Tai Chi training noticeably improved physical functions including gait, static and dynamic balance, enhanced BDNF levels in MW group implied that MindWorks® supplementation potentially promotes neuroprotective effects during aging process.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Nutrition, Food and Exercise Sciences in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 11, 2019.

**NOTE (Keywords):**BDNF, cognitive function, dynamic balance, physical function, supplementation, Tai Chi

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Jeong-Su Kim, Professor Directing Dissertation; Robert J. Contreras, University Representative; Lynn B. Panton, Committee Member; Michael J. Ormsbee, Committee Member.

**SUBJECT:**Kinesiology

**SUBJECT:**Medical sciences

**SUBJECT:**Nutrition

**DEGREE:**Doctoral

**Record number: 226**

**FILENAME:**Yin\_fsu\_0071E\_14982.pdf

**TITLE:**Understanding Microphysics of Snowflakes and Snow Precipitation Process Using Spaceborne Microwave Measurements

**AUTHOR:**Yin, Mengtao

**MEMBER (Professor Directing Dissertation):**Liu, Guosheng, (Professor of meteorology)

**MEMBER (University Representative):**Chicken, Eric, 1963-

**MEMBER (Committee Member):**Ahlquist, Jon E.

**MEMBER (Committee Member):**Bourassa, Mark Allan, 1962-

**MEMBER (Committee Member):**Cai, Ming

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of Earth, Ocean and Atmospheric Science

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (135 pages)

**ABSTRACT:**Snow, another precipitation form besides rain, affects the Earth’s climate distinctly by modifying hydrological and radiative processes. The radiative properties of nonspherical snowflakes are much more complicated than their spherical counterparts, raindrops. Snowflakes with different structures tend to have different scattering properties. Thus it is important for us to enhance the knowledge in falling snow. However, only a few sensors have been available so far that can provide global snowfall measurements including those onboard he Global Precipitation Measurement (GPM) core observatory and the CloudSat satellites. The GPM satellite carries two important instruments for studying snow precipitations, i.e., the Dual–frequency Precipitation Radar (DPR) and the GPM Microwave Imager (GMI). By combining the GPM instruments with another active sensor onboard the CloudSat satellite, the Cloud Profiling Radar (CPR), an unprecedented opportunity arises for understanding the microphysics of snowflakes and the physical processes of snow precipitation. Seizing this opportunity, in this study, we firstly investigate the microphysical properties of snow particles by analyzing their backscattered signatures at different frequencies. Then, the accuracy of simulating passive microwave brightness temperatures at high frequencies is examined under snowfall conditions using the CPR derived snow water content profiles as radiative transfer model inputs. Lastly, a passive microwave snowfall retrieval method is developed in which the a priori database is optimized by tuning snow water content profiles to be consistent with the GMI observations. To understand the microphysical properties of snow clouds, the triple-frequency radar signatures derived from the DPR and CPR collocated measurements are analyzed. It is noticed that there is a clear difference in triple-frequency radar signatures between stratiform and convective clouds. Through modeling experiments, it is found that the triple-frequency radar signatures are closely related to the size and bulk density of snow particles. The observed difference in triple-frequency radar signatures are mainly attributed to the difference in prevalent particle modes between stratiform and convective clouds, i.e., stratiform snow clouds contain abundant large unrimed particles with low density, while dense small rimed particles are prevalent in convective clouds. To assess the accuracy of radiative transfer simulation for passive microwave high frequency channels under snowfall conditions, we evaluate the biases between observed and simulated brightness temperatures for GMI channels at 166 and 183 GHz. A radiative transfer model is used, which is capable to handle the scattering properties of nonspherical snowflakes. As inputs to the radiative transfer model, the snow water content profiles are derived from the CPR measurements. The results indicate that the overall biases of observed minus simulated brightness temperatures are generally smaller than 1 K except for the 166 GHz horizontal polarization (166H) channel. Large biases for GMI channels are found under scenes of low brightness temperatures. Further investigations indicate that the remaining biases for GMI channels are associated with specific cloud types. In shallow clouds, errors in cloud liquid water profiles are likely responsible for the large positive bias at the 166H channel. In deep convective clouds, strong attenuation in CPR radar reflectivities and possible sampling bias both contribute to the GMI remaining negative biases. A snowfall retrieval algorithm is then developed for GMI observations. The data sources and processing methods are adopted from the above study of GMI bias characterization. First, an a priori database is created which contains the snow water content profiles and their corresponding brightness temperatures simulated for GMI channels. A one–dimensional variational (1D–Var) method is employed to optimize the CPR derived snow water content profiles. The so developed a priori database is applied in a Bayesian retrieval algorithm. The retrieval results show that the 1D–Var optimization can improve the vertical structure of retrieved snow water content. Additionally, this method can bring the global mean distribution of GMI retrieved surface snow water closer to the CPR estimates. This research explores the application of spaceborne microwave measurements to snowfall studies by combining CloudSat and GPM instruments. It provides new knowledge on snowflake microphysics and applicable methods in retrieving three–dimensional snow water distribution from passive high frequency microwave measurements.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Earth, Ocean and Atmospheric Science in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 7, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Guosheng Liu, Professor Directing Dissertation; Eric Chicken, University Representative; Jon E. Ahlquist, Committee Member; Mark A. Bourassa, Committee Member; Ming Cai, Committee Member.

**SUBJECT:**Meteorology

**DEGREE:**Doctoral

**Record number: 227**

**FILENAME:**Yin\_fsu\_0071N\_15214.pdf

**TITLE:**Parental Involvement, Students' Self-Esteem, and Academic Achievement in Immigrant Families in the United States

**AUTHOR:**Yin, Mengmeng

**MEMBER (Professor Directing Thesis):**Turner, Jeannine E.

**MEMBER (Committee Member):**Roehrig, Alysia D., 1975-

**MEMBER (Committee Member):**Yang, Yanyun

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Education

**CORPORATE NAME:**Department of Educational Psychology and Learning Systems

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (68 pages)

**ABSTRACT:**The current study explored factors that might be related to immigrant students’ academic achievement in the United States. To be specific, this study examined the relationships among parental involvement, students’ self-esteem and students’ academic achievement in immigrant families. In this study, I focused on the ethnicities of Hispanic and Asian immigrants in the United States. Furthermore, the current study investigated the extent to which Hispanic and Asian immigrant students’ self-esteem mediated the relationships between parental involvement and students’ academic achievement. Parental involvement included four dimensions: parental expectations, parental monitoring, parent-child communication, and parental participation in school activities. Using path analysis and multi-group path analysis, data were analyzed from 1,070 immigrant students, who attended 11th and 12th grades, and their parents from the Children of Immigrants Longitudinal Study (1991-2006). After removing the variable of parental monitoring from the path analysis due to no relationship with students’ self-esteem and GPA (with other variables controlled), findings showed that, parental expectations positively predicted students’ self-esteem and their academic achievement; parent-child communication positively predicted students’ self-esteem, but negatively predicted students’ academic achievement. In addition, parental participation in school activities positively predicted students’ self-esteem; however, there was no significant relationship with students’ academic achievement. Additionally, students’ self-esteem was not related to students’ academic achievement and had no mediation effect on the relationships between parental involvement and students’ academic achievement. These findings showed no differences between Hispanic and Asian immigrant families. Keywords: parental involvement, academic achievement, self-esteem, immigrant families, CILS

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Thesis submitted to the Department of Educational Psychology and Learning Systems in partial fulfillment of the requirements for the degree of Master of Science.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 17, 2019.

**NOTE (Keywords):**academic achievement, Asian and Hispanic immigrants, CILS, immigrant families, parental involvement, self-esteem

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Jeannine E. Turner, Professor Directing Thesis; Alysia Roehrig, Committee Member; Yanyun Yang, Committee Member.

**SUBJECT:**Educational psychology

**SUBJECT:**Asian Americans--Study and teaching

**SUBJECT:**Hispanic Americans

**SUBJECT:**Study and teaching

**DEGREE:**Masters

**Record number: 228**

**FILENAME:**Youngblood\_fsu\_0071E\_15024.pdf

**TITLE:**On Un-Silencing Voices: Tarantism and the Gendered Heritage of Apulia

**AUTHOR:**Youngblood, Felicia K. (Felicia Kailey)

**MEMBER (Professor Directing Dissertation):**Eyerly, Sarah

**MEMBER (University Representative):**Caputi, Celia R.

**MEMBER (Committee Member):**Bakan, Michael B.

**MEMBER (Committee Member):**Gunderson, Frank D.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (187 pages)

**ABSTRACT:**Derivatives of a thousand-year-old music and healing ritual from Italy’s Salentine peninsula, known as tarantism, are recognized in different forms and appear in various locations throughout the world. Tarantism was designed to heal women, known as tarantate, from spider-bite poisoning through the repetitive rhythms and sonorous melodies of pizzica music. This project seeks to understand the importance of the tarantate and their voices to the tarantism ritual and to the people of Apulia, Italy. In previous scholarship, the voices of these women were often overlooked in favor of more tangible items, such as the ritual’s music instruments. In spite of this underrepresentation, my ethnographic and archival research reveals that the tarantate are valued as cornerstones of Apulian cultural heritage. In analyzing the efforts of the Club per l’UNESCO di Galatina to preserve tarantism through festivals and reenactments, I demonstrate how modern-day cultural sustainability efforts can be used to reclaim voices that are essential to local traditions yet traditionally underrepresented in scholarly literature. Documenting the importance of the tarantate and analyzing their roles in local heritage reclamation efforts requires an inherently multi-disciplinary lens. At the center of this study lies ethnographic research that catalogs the activities of the Club per l’UNESCO di Galatina and the perspectives of the Apulian people as local practices develop to preserve tarantism. A theoretical framework in gender studies, cultural heritage, and voice studies is necessary to problematize the role of the women at the center of the ritual. Knowledge of history, social systems, and religion are required to understand the setting and impetus for tarantism in Apulia. Finally, my background in musicology informs analysis of the ritual’s sound-based foundation. Research and analysis in each of these areas contributes to a holistic reinterpretation of how sonic cultural heritage can be sustained and how underrepresented voices can be understood in traditions around the globe.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the College of Music in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 25, 2019.

**NOTE (Keywords):**Cultural Heritage, Gender, Italy, Music Sustainability, Tarantism, Voice

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Sarah J. Eyerly, Professor Directing Dissertation; Celia Caputi, University Representative; Michael B. Bakan, Committee Member; Frank Gunderson, Committee Member.

**SUBJECT:**Music

**SUBJECT:**Ethnology

**DEGREE:**Doctoral

**Record number: 229**

**FILENAME:**Yuan\_fsu\_0071E\_15098.pdf

**TITLE:**Metabolism and Redox Cycle in Human Mesenchymal Stem Cell with Culture Induced Senescence: Homeostasis and Rejuvenation

**AUTHOR:**Yuan, Xuegang

**MEMBER (Professor Directing Dissertation):**Ma, Teng

**MEMBER (University Representative):**Logan, Timothy M., 1961-

**MEMBER (Committee Member):**Grant, Samuel C.

**MEMBER (Committee Member):**Li, Yan

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**FAMU-FSU College of Engineering

**CORPORATE NAME:**Department of Chemical and Biomedical Engineering

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (183 pages)

**ABSTRACT:**Human mesenchymal stem cells (hMSCs) isolated from various adult tissues are primary candidates in cell therapy and being tested in clinical trials for a wide range of diseases. The pro-regenerative and therapeutic properties of hMSCs are largely attributed to their trophic effects that coordinately modulate the progression of inflammation and enhance the endogenous tissue repair by host progenitor cells. However, immediately after isolation and upon in vitro culture expansion, hMSCs lose their in vivo quiescent state and start to accumulate genetic and phenotypic changes that significantly alter their phenotypic properties, with increased heterogeneity and reduced therapeutic potential. The proliferation of hMSCs is limited and long-term culture-induced changes lead to cellular senescence and metabolic alteration, resulting in reduced therapeutic outcome. Since clinical application requires large-scale production of hMSCs with defined cellular properties, preserving cellular homeostasis during hMSCs in vitro expansion is a major barrier for hMSCs based industrial production. Once viewed as a mere consequence of the state of a cell, metabolism is now acknowledged to play regulatory roles in cellular events and signaling pathways that govern stem cell phenotype and functional properties. Regulation of hMSC metabolism via preconditioning strategies have been proposed to enhance hMSC stem cell properties. However, the mechanistic details of metabolic and redox alterations in hMSC replicative senescence are not well understood. The current study is to understand the role of energy metabolism in regulating hMSC cell fate during in vitro culture expansion to develop metabolic strategies to augment hMSCs therapeutic outcome. We studied therapeutic relevant properties of hMSC such as immune modulation with regards to the energy metabolism and cellular signaling networks in Chapter 2. Moreover, preconditioning of hMSCs via 3D aggregation regulated energy metabolism and redox cycle, further activated PI3K/Akt survival pathways. The therapeutic potentials of 3D aggregate-derived hMSCs were studied in a rat MCAO stroke model in Chapter 3. To address the scale-up production of hMSC aggregates for potential pre-clinical applications, a novel microcarrier-based bioreactor was developed with thermal-response materials. Non-invasive and non-enzymatic procedures can be achieved for hMSC expansion and 3D aggregates production as demonstrated in Chapter 4. At last, we reported the breakdown of cellular homeostasis in hMSCs with culture-induced senescence. Basic cellular characteristics including proliferation, regenerative potential, cell cycle, and mitochondrial function were disrupted during culture expansion of hMSCs. Culture-induced senescence of hMSCs also induced impairment of migratory ability and immunomodulation. Decrease of basal autophagy and mitophagy indicated the breakdown of cellular homeostasis in hMSCs with replicative senescence. GC-MS metabolomics and proteomics revealed the loss of glycolytic phenotype and energy homeostasis with replicative expansion of hMSCs, which reconfigured hMSCs to an insufficient energy production state from glycolysis towards OXPHOS following senescence. Rapid production of energy required for maintaining cellular properties of hMSCs induced mitochondrial dysfunction and redox imbalance. We also found that nicotinamide adenine dinucleotide (NAD+) plays a central role in regulating senescent response along with hMSC expansion. It has been shown that NAD+ repletion restored mitochondrial and stemness in improving longevity of rodent. Our results show a significant decline of NAD+ during rapid expansion of hMSCs. NAD+/Sirtuin axis plays a crucial role in restoring mitochondrial function, including mitochondrial biogenesis, membrane potential and electron transport ability. By repletion of NAD+ to senescent hMSCs, various stem cell properties were recovered. Together, the results revealed the mechanistic connection between metabolic regulation and hMSC fate and therapeutic potentials, and provided metabolic and redox target to maintain hMSC cellular homeostasis for cell therapy applications in manufacturing.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Chemical and Biomedical Engineering in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**March 11, 2019.

**NOTE (Keywords):**culture expansion, human mesenchymal stem cells, immunomodulation, metabolism, senescence, stroke

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Teng Ma, Professor Directing Dissertation; Timothy M. Logan, University Representative; Samuel C. Grant, Committee Member; Yan Li, Committee Member.

**SUBJECT:**Biomedical engineering

**SUBJECT:**Chemical engineering

**SUBJECT:**Biochemistry

**DEGREE:**Doctoral

**Record number: 230**

**FILENAME:**Yuasa\_fsu\_0071E\_15149.pdf

**TITLE:**An Exploration of Two Twenty-First Century American Works for Clarinet and Orchestra: Daniel Freiberg's Latin American Chronicles Frank Proto's Paganini in Metropolis

**AUTHOR:**Yuasa, Katsuya

**MEMBER (Professor Co-Directing Treatise):**Bish, Deborah, 1971-

**MEMBER (Professor Co-Directing Treatise):**Holden, Jonathan, (Clarinetist)

**MEMBER (University Representative):**Clary, Richard

**MEMBER (Committee Member):**Amsler, Eva

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (34 pages)

**ABSTRACT:**I became interested in discovering new clarinet concertos after signing a three-year artist contract with the Mu Phi Epsilon Foundation to present new works. My background and passion for classical, jazz, and new music led me to explore pieces that combined these stylistic influences. Two pieces captured my imagination and became the focus of my research: Daniel Freiberg’s Latin American Chronicles and Frank Proto’s Paganini in Metropolis. This treatise (in conjunction with two lecture recitals presented in Fall 2018 and Spring 2019) will focus on the lives and music of Daniel Freiberg and Frank Proto. My hope is to provide a spotlight for these composers and their works, and the potential of these pieces to break boundaries between jazz and classical styles in the clarinet community. Daniel Freiberg was inspired to write his concerto for the principal clarinetist of Westdeutscher Rundfunk Köln (WDR) Radio Orchestra, Andy Miles. Known in Europe as a crossover artist, Miles has an unusual resume as a saxophonist in rock bands, tin whistler in folk bands, and clarinetist in jazz band and orchestras. At the time he reached out to Freiberg, Miles was making an album titled “Symphonic Jazz with Andy Miles,” with other notable composers Jorge Calandrelli and Jeff Beal. Looking to find more pieces, he reached out to Freiberg. Latin American Chronicles was commissioned in 2015 by the WDR Symphony Orchestra from Cologne, Germany, directed by Wayne Marshall. Comprised of three movements, the work explores classical, jazz, and South American folk music. Frank Proto collaborated with Eddie Daniels, a high school classmate, to write his concerto. Arguably, one of the most influential jazz clarinetists in recent years, Eddie Daniels has had a profound impact on this genre, inspiring composers such as Jorge Calandrelli and Jeff Beal to write jazz-inspired concertos for him. Between 1994 and 2001, Proto explained those years to be the series of “Paganini Pieces.” He had written Capriccio di Niccolo for Doc Severinson in 1994, followed by Nine Variants on Paganini for Francois Rabbath in 2002. While Daniels was on tour, the University of Texas Wind Ensemble led by Jerry Junkin, wanted something new and special to perform, which led to the commission of Paganini in Metropolis in 2002. The premiere was a rousing success, leading to another commission of Paganini in 2003 with the Santa Fe Symphony Orchestra, Eddie Daniels, and conductor David Wroe. This treatise will provide a brief background for Daniel Freiberg and Frank Proto, historical information about each piece, and how they integrate different stylistic elements, ultimately leading to the expansion of the boundaries of classical music.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Treatise submitted to the College of Music in partial fulfillment of the requirements for the degree of Doctor of Music.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 5, 2019.

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Deborah Bish, Professor Co-Directing Treatise; Jonathan Holden, Professor Co-Directing Treatise; Richard Clary, University Representative; Eva Amsler, Committee Member.

**SUBJECT:**Music

**DEGREE:**Doctoral

**Record number: 231**

**FILENAME:**Yurevitch\_fsu\_0071N\_15161.pdf

**TITLE:**Paumanok Islands

**AUTHOR:**Yurevitch, Theodore Vadim

**MEMBER (Professor Directing Thesis):**Stuckey-French, Elizabeth

**MEMBER (Committee Member):**Howard, Ravi

**MEMBER (Committee Member):**Horack, Skip

**MEMBER (Committee Member):**Roberts, Diane, 1959-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Arts and Sciences

**CORPORATE NAME:**Department of English

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (221 pages)

**ABSTRACT:**Paumanok Islands is a novel concerned with characters leaving histories of tyranny. The main protagonist is a woman named Lupe, whose life as a travel agent in a Long Island beach town is upended when she sees a picture that incidentally includes her husband, who disappeared more than ten years before. The novel follows her as she investigates what might have happened to him and why everyone connected with the photograph appears to be disappearing.

**NOTE (embargo):**4

**NOTE (Submitted Note):**A Thesis submitted to the Department of English in partial fulfillment of the requirements for the degree of Master of Fine Arts.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 5, 2019.

**NOTE (Keywords):**Fiction, Mystery, Novel

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**Elizabeth Stuckey-French, Professor Directing Thesis; Ravi Howard, Committee Member; Skip Horack, Committee Member; Diane Roberts, Committee Member.

**SUBJECT:**Folklore

**DEGREE:**Masters

**Record number: 232**

**FILENAME:**Zabanal\_fsu\_0071E\_15129.pdf

**TITLE:**Effects of Different Instrumental Accompaniment on the Intonation of High School and Collegiate Violinists, Violists, and Cellists

**AUTHOR:**Zabanal, John Rine Anacito

**MEMBER (Professor Directing Dissertation):**Geringer, John M

**MEMBER (University Representative):**Holzman, Bruce

**MEMBER (Committee Member):**Bugaj, Kasia

**MEMBER (Committee Member):**Madsen, Clifford K.

**MEMBER (Committee Member):**Thrasher, Michael, 1972-

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

**PUBLICATION:**Tallahassee, Florida: Florida State University, 2019

**PHYSICAL DESCRIPTION:**1 online resource (92 pages)

**ABSTRACT:**The purpose of this study was to examine the effects of different instrumental accompaniments on the intonation of violinists, violists, and cellists in a melodic context. The following questions guided this research: (1) Are there differences in tuning accuracy of melodic content between accompanied and unaccompanied conditions among string musicians? (2) Are there differences in tuning accuracy of melodic content between accompaniment octaves? (3) Are there differences in intonation accuracy between string, oboe, and piano accompaniments? (4) Are there differences between the number of flat, sharp, and in-tune responses of participants? (5) Are there differences in string musician preferences between accompaniment types? (6) Are string musicians’ self-perceptions of tuning accuracy associated with performed pitch accuracy? (7) Are there differences between age and experience of participants in intonation accuracy with various accompaniment types? Performances of Frère Jacques were recorded by a cellist, oboist, pianist, and a violinist to serve as accompaniment stimuli for the study. Additionally, a questionnaire was created to measure preferences for accompaniment, perceptions of tuning accuracy, and collect background information of participants. The participants (N = 103) were high school (n = 60) and collegiate (n = 43) violinists (n = 55), violists (n = 22), and cellists (n = 26). Participants performed an excerpt of Frère Jacques in Eb major in five conditions: with a cello accompaniment, oboe accompaniment, piano accompaniment, violin accompaniment, and as a solo. Absolute cent deviation from the tonic, mediant, subdominant, and dominant scale degrees were collected from each participant for analysis. A significant main effect of intonation was found for accompaniment conditions. Participants performed more in tune with the cello, oboe, and violin accompaniments than with the solo. Additionally, they performed more in tune with the oboe accompaniment than with the piano accompaniment. The octave of accompaniment and instrument performed also did not appear to affect intonation. A significant main effect was found between high school and college participants. High school participants performed with less pitch acuity than college participants. An additional significant main effect was found between the deviations of analyzed notes. The Ab (subdominant) had significantly higher mean cent deviation than the Eb (tonic) and Bb (dominant). No differences were found between instruments performed and no interactions between variables were found. Participants demonstrated a propensity to perform with sharp intonation. Sharp responses occurred more frequently than in-tune (defined as ±6 cents) and flat responses with high school participants. Additionally, performances with the oboe accompaniment produced more in-tune responses than other conditions. In-tune responses occurred more frequently with collegiate participants; however, sharp responses occurred more frequently than flat responses. Performances with the oboe accompaniment also produced the most frequent flat responses as well as the lowest number of sharp responses. Questionnaire responses indicated that participants preferred to perform with the string accompaniments more than the non-string accompaniments. Participants least preferred to perform with the oboe accompaniment compared to the other accompaniments. A significant main effect was found in participants’ rating of their perceived intonation accuracy between conditions. Although participants rated their intonation as highest with the cello, their performances did not reflect this perception. A significant main effect was also found between the levels of participants. High school participants rated their intonation lower than college participants. No significant main effect was found between instrumental groups and no significant interactions were found. A moderate positive correlation was found between participants’ perception of their intonation and their actual performance of intonation with the violin accompaniment. Additionally, a weak positive correlation was found for the cello accompaniment and the solo condition. Participants’ rating of their perceived intonation correlated positively to the actual pitch accuracy for the string accompaniments and solo condition while no associations were found for non-string accompaniments.

**NOTE (embargo):**0

**NOTE (Submitted Note):**A Dissertation submitted to the College of Music in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

**NOTE (Degree Awarded):**Spring Semester 2019.

**NOTE (Date of Defense):**April 19, 2019.

**NOTE (Keywords):**accompaniment, intonation, string instruments, timbre

**NOTE (Bibliography Note):**Includes bibliographical references.

**NOTE (Advisory Committee):**John M. Geringer, Professor Directing Dissertation; Bruce Holzman, University Representative; Katarzyna Bugaj, Committee Member; Clifford K. Madsen, Committee Member; Michael M. Thrasher, Committee Member.

**SUBJECT:**Music

**SUBJECT:**Music--Instruction and study

**SUBJECT:**Audiology

**DEGREE:**Doctoral