# 2019 Summer ETDs

## Record number: 1

**FILENAME:**Abrishami\_fsu\_0071E\_15325.pdf

**TITLE:**Time Series Analysis and Forecasting for Business Intelligence Applications

**AUTHOR:**Abrishami, Soheila

**MEMBER (professor directing dissertation):**Kumar, Piyush, (Computer Science Professor)

**MEMBER (university representative):**Mio, Washington

**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 (120 pages)

**ABSTRACT:**In this dissertation, I explore different types of applications in the area of applied machine learning, time series analysis, and prediction. Time series forecasting is a fundamental task in machine learning and data mining. It is an active area of research, especially in applications that have direct impact on the real world. Foot traffic forecasting is one such application, which has a direct impact on businesses and non-profits alike. An accurate foot traffic prediction system can help retail businesses, physical stores, and restaurants optimize their labor schedule and costs, and reduce food wastage. In this work, we design a large scale data collection and prediction system for store foot traffic. We propose and compare different prediction models for foot traffic forecasting. Our foot traffic data has been collected from wireless access points deployed at over 65 businesses across the United States, for more than one year. We validate our work by comparing to state-of-the-art time series forecasting approaches. Results show the competitiveness of our proposed method in comparison to our previous work and state-of-the-art procedures for time series forecasting. Another challenging task in the area of time series forecasting is financial time series forecasting. As another part of my dissertation, I present a deep learning system for stock price prediction, which uses a variety of data for a subset of the stocks on the NASDAQ exchange to forecast the stock price. The prediction model is trained on the minutely data for a specific stock ticker and predicts the closing price of that stock ticker for multi-step-ahead. Our deep learning framework consists of a Variational Autoencoder for removing noise and uses time-series data engineering to combine the higher-level features with the original features. This new set of features is fed to a Stacked LSTM Autoencoder for multi-step-ahead prediction of the stock closing price. Besides, this prediction is used by a profit-maximization strategy to provide advice on the appropriate time for buying and selling a specific stock. Results show that the proposed framework outperforms the state-of-the-art time series forecasting approaches with respect to predictive accuracy and profitability. In the second part of my work, we present a web-based tool for automatic recoloring of web pages. Automatic application of different color palettes to web pages is essential for both professional and amateur web designers. However, existing recoloring tools for images and web pages do not provide full recoloring. We replace colors in .css, .html, and .svg files, and recolor images such as logos, banners, and background tiles to recolor web pages entirely. The new color theme is based on a color guide image provided by the user. The evaluation shows a high level of satisfaction with the quality of palettes and results of recoloring.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**June 28, 2019.

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

**NOTE (Advisory Committee):**Piyush Kumar, Professor Directing Dissertation; Washington Mio, University Representative; Xiuwen Liu, Committee Member; Peixiang Zhao, Committee Member.

**SUBJECT:**Computer science

**DEGREE:**Doctoral

## Record number: 2

**FILENAME:**AlTaie\_fsu\_0071E\_15386.pdf

**TITLE:**High Voltage Insulation Systems for Gas-Cooled Superconducting Power Devices

**AUTHOR:**Al-Taie, Aws Habeeb Mohammed

**MEMBER (professor directing dissertation):**Pamidi, Sastry V.

**MEMBER (university representative):**Ordóñez, Juan Carlos, 1973-

**MEMBER (committee member):**Foo, Simon Y.

**MEMBER (committee member):**Graber, Lukas

**MEMBER (committee member):**Anubi, Olugbenga Moses

**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 (146 pages)

**ABSTRACT:**Demand for electrical power is increasing around the globe to keep up with the ever-increasing annual load growth, which in turn requires new power sources to be installed. As a society, there is a greater emphasis for power sources to be environmentally friendly, such as wind and solar. For large-scale wind and solar power sources, electric utilities need to install them in the optimal regions which are generally far away from the load centers. Hence, efficient and high capacity power transmission solutions are required to integrate these energy sources into the power grid. Another new trend of electrifying the transportation sector with electric ships and aircrafts requires compact electric power devices with high volumetric and gravimetric power densities. Therefore, electric utilities and the transportation sector have been exploring innovative solutions for energy efficient and high-power density technology options, which include utilizing superconducting power devices. High temperature superconducting (HTS) power cables and other devices have been developed and installed in several countries around the world to achieve more efficient and significantly compact devices compared to their copper counterparts. A long-term vision for the future power transmission is a cross-country multi-terminal DC HTS cable transmission system. Gas-cooled HTS power cables are being explored for electric transportation applications, including aircrafts and ships, due to asphyxiation risks associated with liquid nitrogen. Use of a gas as the cryogen instead of a liquid, however, poses technical challenges resulting from the reduced heat capacity and lower dielectric strength which could affect the overall performance of HTS cables. When helium gas is used as the cryogen in HTS power devices, the electrical insulation method and materials utilized for liquid nitrogen cooled HTS cables are not applicable. For liquid nitrogen cooled HTS power cables for electric utility applications, lapped tape insulation has been used to achieve operating voltages in excess of 100 kV. When this same design is utilized for electrical insulation system of helium gas cooled HTS cables, partial discharge (PD) occurs at voltages <10 kV, limiting the operational voltages. The butt gaps within the lapped tape insulation layers trap helium gas and cause the associated field enhancements leading to low partial discharge inception voltages. The research described in this dissertation focused on extending the understanding the technology challenges associated with the use of gas media as part of the electrical insulation system at cryogenic temperatures. The emphasis was on the development of the concept of superconducting gas insulated line (S-GIL) as an alternative to lapped tape electrical insulation system to HTS power cables to enable higher operating voltages for helium gas cooled HTS power cables. The S GIL, which is similar to the Gas Insulated Line (GIL), was conceptualized recently at Florida State University’s Center for Advanced Power Systems (FSU-CAPS). The S-GIL utilizes the flow of pressurized cryogenic gas instead of stagnant room temperature gas for GIL. The S-GIL addresses the challenge of low partial discharge inception voltages (PDIV) in lapped tape insulated, gas cooled HTS cables by eliminating the need for solid insulation layers on the cable. However, the need to maintain the cable on the axis of the cryostat imposes the requirement of insulator spacers. This work explored bundled tubular spacers for S-GIL as an option for spacers and 1-m long prototype cables were fabricated and characterized in gaseous helium and helium-based gas mixtures. Surface flashover along the surface of the spacers is expected to be one of the design factors which influences the voltage rating for S-GIL. The designs considered different tube materials and gases and a variety of experiments were conducted at room temperature and at cryogenic temperatures to gain a thorough understanding of the S-GIL design limitations. To gain further understanding of the limits of the S-GIL concept, the design was tested with liquid nitrogen as the insulation medium to decipher the role of the intrinsic dielectric strength of the insulation medium. Besides providing additional insights into S-GIL concept, the liquid cooled alternative will have applications in terrestrial power systems and transportation sector where higher operating voltages and efficient thermal designs are needed. The research also focused on investigating the surface flashover phenomenon in GHe environment. This included investigating the triple point where the conductor, solid insulation material, and gas insulation media meet. Surface flashover measurements were performed with varying gas density, temperature, gas composition, solid insulation material, applied voltage waveform, and electric field strength and distribution.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**June 28, 2019.

**NOTE (Keywords):**electrical insulation, gases, high voltage, superconductivity

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

**NOTE (Advisory Committee):**Sastry Pamidi, Professor Directing Dissertation; Juan Ordonez, University Representative; Simon Foo, Committee Member; Lukas Graber, Committee Member; Olugbenga Moses Anubi, Committee Member.

**SUBJECT:**Electrical engineering

**DEGREE:**Doctoral

## Record number: 3

**FILENAME:**Aley\_fsu\_0071N\_15353.pdf

**TITLE:**Characterization of a High-Lift, Supercritical Airfoil with Microjets

**AUTHOR:**Aley, Kade Stephen

**MEMBER (professor directing thesis):**Kumar, Rajan, (Professor of Mechanical Engineering)

**MEMBER (committee member):**Oates, William

**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 (70 pages)

**ABSTRACT:**Active flow control (AFC) has the potential for substantial performance gains and meeting the challenges of next-generation high-lift aircraft. High-lift wings employ multi-element trailing edge flaps during takeoff and landing. When the aircraft is at cruise speed, these flaps are not required and are retracted to reduce drag. These aircraft wings with high-lift mechanisms enhance the lift characteristics at slower speeds, but suffer due to the added weight of these deployment/retraction mechanisms. In the present study, we have investigated the effect of active flow control using microjets to enhance the performance of a two-dimensional high-lift supercritical airfoil with a simply hinged flap. The airfoil used in the study is the NASA Energy Efficient Transport (EET) and the wind-tunnel tests were conducted at a freestream velocity of 20 m/s. Two different scaled models were used corresponding to Reynolds numbers of 1.3 x 105 and 3.4 x 105. The experiments pertaining to the small scaled model were carried out with two angles of incidence of 0° and 4° at a constant flap deflection of 20°. For the large scale model, a constant angle of incidence of 0° and flap deflection angles of 20° and 30° were investigated. A range of microjet momentum ratios and microjet orientations were studied for both models. Particle Image Velocimetry was carried out to study the mean velocity field and the effect of microjet control at the flap region of the airfoil. For the first model, the baseline flow at both the angles of incidence separates at the hinge line and remain separated over the entire flap region. The size of the re-circulation region is found to gradually decrease with an increase in microjet momentum ratio. Microjets oriented normal to the airfoil surface were relatively more effective and successful in re-attaching the flow over the entire airfoil at both the angles of incidence. Experiments for the second model consisted of both Planar and Stereoscopic Particle Image Velocimetry. The baseline flow is separated over a third of the flap at 20° and over the entire flap at 30°. Microjets oriented at a more tangential angle are able to completely re-attach the flow at both flap angles. In general, active flow control using high-momentum microjets was very effective in eliminating/reducing flow separation, however, its effectiveness was dependent on the geometric and flow parameters.

**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):**Summer Semester 2019.

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

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

**NOTE (Advisory Committee):**Rajan Kumar, Professor Directing Thesis; William Oates, Committee Member; Kourosh Shoele, Committee Member.

**SUBJECT:**Mechanical engineering

**DEGREE:**Masters

## Record number: 4

**FILENAME:**Alfasso\_fsu\_0071N\_15442.pdf

**TITLE:**Habitat Suitability Modelling of Shallow Water Structure Forming Communities in the Big Bend Region of Florida's Northeastern Gulf of Mexico

**AUTHOR:**Alfasso, Adam Charles

**MEMBER (professor directing thesis):**Lewis, Sandra

**MEMBER (committee member):**Chanton, Jeffrey P.

**MEMBER (committee member):**Stukel, Michael R.

**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 (44 pages)

**ABSTRACT:**Hardbottom habitats in the Big Bend Region of the Gulf of Mexico are the foundation for structure-forming species, such as corals and sponges. These structure forming communities (SFC) provide important ecological services; they serve as spawning grounds, feeding grounds, and as refugia and nurseries for a diverse complex of seasonally and ontogenetically mobile fish and invertebrate species, many of which are important contributors to commercial and recreational fisheries. Knowledge of the extent of such hardbottom communities is an important tool for monitoring species recruitment success, stock assessments, and protection from over-exploitation. Modelling techniques can be used to evaluate the habitat suitability for SFC within this region, as well as elucidate the main factors driving the measure of suitability. The Big Bend Region is understudied, lacking comprehensive data on species and community presence. Using presence data for six abundant and long-lived taxa (2 stony corals, 3 sponges, and gorgonians), a habitat suitability model was constructed with the presence-only modelling technique Maxent, to describe the suitability of habitat for SFC in the Big Bend Region. Presence records were collected from in-situ surveys of suspected hardbottom habitat outside of Apalachicola Bay and from the 2010-2014 NOAA Fisheries reef fish surveys for the same region. Records were correlated with environmental covariates and compared against randomly sampled faux-absence points to test their effects on habitat suitability. Results of the model predicts that over 944 km2 of suitable habitat area exists between Port St. Joe and St. Marks. The model exceeded random performance, and found that northward current velocity, salinity, terrain type, and depth are the most important variables contributing to SFC habitat. Knowledge regarding the extent of these communities can elucidate factors that influence the fitness of fish species in the GOM, and ultimately inform species management.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Habitat Suitability, Maximum Entropy Modelling, Northeastern Gulf of Mexico, Structure forming communities

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

**NOTE (Advisory Committee):**Sandra Brooke, Professor Directing Thesis; Jeff Chanton, Committee Member; Michael Stukel, Committee Member.

**SUBJECT:**Marine biology

**SUBJECT:**Environmental sciences

**DEGREE:**Masters

## Record number: 5

**FILENAME:**Alhaddad\_fsu\_0071N\_15346.pdf

**TITLE:**Design Practitioner Perceptions, Attitudes, and Barriers: The State of Natural Environment and Human Sustainability Building Practicies in Saudi Arabia

**AUTHOR:**Alhaddad, Nemah Nasser

**MEMBER (professor directing thesis):**Pable, Jill

**MEMBER (committee member):**Waxman, Lisa K.

**MEMBER (committee member):**Ransdell, Marlo E.

**MEMBER (committee member):**McLane, Yelena

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Fine Arts

**CORPORATE NAME:**Department of Interior Architecture and Design

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

**PHYSICAL DESCRIPTION:**1 online resource (116 pages)

**ABSTRACT:**Sustainability is a broad concept that encompasses social, economical and environmental aspects. Many countries around the world have recently adopted this concept due to the worldwide concern that human behavior is causing long-term harm not only to the environment but also to human health. This study investigates the current status of sustainability, focusing on both enhancing human wellbeing and protecting the environment, from the viewpoints of architects and interior design practitioners within Saudi Arabia. The objective of this study was to identify possible barriers, attitudes, and perceptions regarding sustainable development of professionals who are incorporating these practices within their projects. The information gathered in this study was obtained through related professional article and journals and was reinforced with knowledge gained from interviews conducted with practitioners who have worked on sustainable projects within Saudi Arabia. The results of the study indicated that the application of sustainability principles in Saudi Arabia commercial building projects is currently limited in both scope and size. The practitioners interviewed for this study displayed overall positive attitudes toward sustainability practices. There was a lack of knowledge and attention paid to the importance of the human wellness principles that are also a part of sustainability, however. Moreover, participants identified economic, educational, and governmental hurdles that influence and suppress sustainable development in Saudi Arabia. Due to these hurdles, the degree of sustainability application is inconsistent in regions across the country. Potential implications regarding economic, social and environmental aspects are detailed and potential solutions that would accelerate sustainable development in the country are identified.

**NOTE (Submitted Note):**A Thesis submitted to the Department of Interior Architecture and Design in partial fulfillment of the requirements for the degree of Master of Science.

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

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

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

**NOTE (Advisory Committee):**Jill Pable, Professor Directing Thesis; Lisa Waxman, Committee Member; Marlo Ransdell, Committee Member; Yelena McLane, Committee Member.

**SUBJECT:**Design

**SUBJECT:**Sustainability

**DEGREE:**Masters

## Record number: 6

**FILENAME:**AlvarezAlvarado\_fsu\_0071E\_15364.pdf

**TITLE:**Workload Adaptation Dynamics: The Integrative Role of Cognitiveperceptual-Affective-Motivational Variables and Exertion Tolerance

**AUTHOR:**Alvarez-Alvarado, Stacey

**MEMBER (professor directing dissertation):**Tenenbaum, Gershon

**MEMBER (university representative):**Hickner, Robert C., 1962-

**MEMBER (committee member):**Chow, Graig Michael

**MEMBER (committee member):**Gabana, Nicole T.

**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 (103 pages)

**ABSTRACT:**Overwhelming evidence demonstrates exercising regularly decreases the risk for clinical diseases. One possible explanation for the low exercise adherence rates is the perceptual-cognitive-affective responses that accompany the exercise experience. The dynamics by which these psychological states change as a function of physical effort and related physiological responses have been addressed separately in various conceptual frameworks. Yet, the previous integrative model neglects the crucial role of motivation to adhere and the disposition of exertion tolerance (ET), factors that influence and are influenced by perceived and sustained effort. The purpose of the current study is to expand the scope of the integrated cognitive-perceptual-affective conceptual framework with the motivation to adhere to effort, for the duration of two physical tasks, and when accounting for ET. Thirty male participants performed a constant power cycling test and isometric handgrip test to assess the progression of the rate of perceived exertion, attentional focus, affect, motivation to adhere, and felt arousal along a parallel increase in physiological indicators. The ventilatory threshold was used as a reference point during the aerobic task, while ET was indicated by handgrip task time-to-voluntary exhaustion. Findings indicated significant time effects and linear trends for perceived exertion, attentional focus, affect, and felt arousal, but not motivation to adhere during the handgrip and cycling tasks. ET played a key role in the integrity of the model. Higher ET individuals experienced more positive affective valence and motivation to adhere than those with moderate and lower ET. The intended comprehensive model is primarily proposed to stimulate new research into the mechanisms of adaptation; especially considering clinical populations where future exercise behavior adherence is fundamental.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**aerobic exercise, affective responses, attentional focus, perception of exertion, psychophysiology

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

**NOTE (Advisory Committee):**Gershon Tenenbaum, Professor Directing Dissertation; Robert C. Hickner, University Representative; Graig M. Chow, Committee Member; Nicole T. Gabana, Committee Member.

**SUBJECT:**Psychophysiology

**SUBJECT:**Kinesiology

**DEGREE:**Doctoral

## Record number: 7

**FILENAME:**Amoroso\_fsu\_0071N\_15359.pdf

**TITLE:**That's Not That Bad: Epistemic Injustice, Moral Testimony, and the Harm in Dismissing Judgments of Wrongdoing

**AUTHOR:**Amoroso, Rachel

**MEMBER (committee member):**Hinchman, Edward

**MEMBER (committee member):**May, Simon Căbulea

**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 (40 pages)

**ABSTRACT:**In "Epistemic Injustice: Power and the Ethics of Knowing", Miranda Fricker offers a framework of the ways in which an agent can be wronged in her capacity as a knower. According to Fricker, epistemic injustice comes in two interrelated forms: testimonial injustice and hermeneutical injustice. Testimonial injustice consists in a hearer assigning a "deflated level of credibility" to a speaker's word, owing to a negative identity prejudice the hearer holds about the speaker. Hermeneutical injustice is purely structural and consists in a speaker's inability (or difficulty) to render their experiences intelligible to others. This paper expands on Fricker's view by distinguishing between descriptive testimony and prescriptive (moral) testimony. I argue that Fricker's view limits itself to cases of descriptive testimony, and therefore fails to track wrongs unique to cases of testimonial injustice involving moral claims. I go on to define the main harm in dismissing moral claims as moral objectification and argue that it wrongs a speaker by treating them as lacking the capacity to reliably form moral judgments. This in turn, excludes them from the community of moral agents with standing to make demands. To illustrate how this form of testimonial injustice has distinct wrong-making features, I discuss Professor Anita Hill's historic testimony during Justice Clarence Thomas's 1991 confirmation hearing. Hill's testimony does more than offer a report about the sexual harassment she faced while working with Justice Thomas. It also evaluates his behavior as wrong and issues a demand on the committee members to factor her testimony into their own evaluation of Thomas's character. In assigning a credibility deficit to the prescriptive component of Hill's testimony, this demand is thwarted and Hill's testimony is denied the appropriate normative force. Hill herself is also treated as though she cannot accurately judge the normative content of her own experiences. Fricker's framework does not have the machinery to fully capture the epistemic injustice perpetrated in cases of moral testimony like Anita Hill's. Distinguishing between descriptive vs. prescriptive testimony equips Fricker’s view with the tools to track more cases of testimonial injustice and expand on the wrong-making features of epistemic injustice. To illustrate how this form of testimonial injustice has distinct wrong-making features, I discuss Professor Anita Hill's historic testimony during Justice Clarence Thomas's 1991 confirmation hearing. Hill's testimony does more than offer a report about the sexual harassment she faced while working with Justice Thomas. It also evaluates his behavior as wrong and issues a demand on the committee members to factor her testimony into their own evaluation of Thomas's character. In assigning a credibility deficit to the prescriptive component of Hill's testimony, this demand is thwarted and Hill's testimony is denied the appropriate normative force. Hill herself is also treated as though she cannot accurately judge the normative content of her own experiences. Fricker's framework does not have the machinery to fully capture the epistemic injustice perpetrated in cases of moral testimony like Anita Hill's. Distinguishing between descriptive vs. prescriptive testimony equips Fricker’s view with the tools to track more cases of testimonial injustice and expand on the wrong-making features of epistemic injustice. Chapter one of this paper will outline Fricker’s account of epistemic injustice and the cases she uses to illustrate how it is perpetrated in linguistic exchange. Chapter two will focus on the distinction between descriptive, Fricker-style testimony and prescriptive testimony. I will analyze Anita Hill’s statement to the Senate Judiciary Committee in the context of testimonial injustice and isolate the morally relevant ways in which it differs from the examples of epistemic injustice Fricker’s account offers. Chapter three will explain why it is useful for a theory of epistemic injustice to distinguish between testimonies issuing reports and testimonies issuing moral judgments that place demands on a hearer. Here I will also consider some potential objections Fricker might raise against my view that dismissal of prescriptive testimony consists in wrong-making features distinct from those she picks out her own framework. Chapter four will outline my concept of moral objectification, a harm that results from the discrediting of moral testimony. I will discuss how this concept maps on to certain abuse tactics already being discussed within feminist discourse out in the world. I conclude by further elucidating the upshot of my proposed distinction between prescriptive and descriptive testimony and how it bears on other discussions of power-based harm within feminist philosophy more broadly.

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

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

**NOTE (Date of Defense):**June 21, 2019.

**NOTE (Keywords):**Anita Hill, Epistemic Injustice, Feminist Philosophy, Miranda Fricker, Moral Psychology, Social Epistemology

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

**NOTE (Advisory Committee):**Andrea Westlund, Professor Directing Thesis; Edward Hinchman, Committee Member; Simon May, Committee Member.

**SUBJECT:**Ethics

**SUBJECT:**Knowledge, Theory of

**SUBJECT:**Women's studies

**DEGREE:**Masters

## Record number: 8

**FILENAME:**Anastasiou\_fsu\_0071E\_15357.pdf

**TITLE:**Study of the 18Ne(α, p)21Na Reaction with Anasen and Its Significance in the Breakout from the Hot-CNO Cycle

**AUTHOR:**Anastasiou, Maria

**MEMBER (professor directing dissertation):**Weidenhoever, Ingo Ludwing M.

**MEMBER (university representative):**Albrecht-Schmitt, Thomas E.

**MEMBER (committee member):**Huffenberger, Kevin M., 1977-

**MEMBER (committee member):**Riley, Mark A.

**MEMBER (committee member):**Volya, 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 (112 pages)

**ABSTRACT:**18Ne(α,p)21Na reaction is one of the reactions providing a pathway for breakout from the hot CNO cycles to the rp-process in Type I X-ray bursts. The actual conditions under which the breakout occurs depend critically on the thermonuclear reaction rate. This rate has not been sufficiently determined yet over the temperatures present under X-ray burst conditions. We study the direct 18Ne(α,p)21Na reaction with the Array for Nuclear Astrophysics and Structure with Exotic Nuclei (ANASEN), using a helium gas target and an 18Ne radioactive beam. ANASEN is an active gas target detection system that uses tracking of the light reaction products in conjunction with energy measurements in Silicon detectors. The position information required for the tracking is provided by a Multi-Anode Proportional Counter in combination with the Silicon detectors. From the tracking the location of the interaction is obtained, which is directly correlated to the energy of the beam particle. While the beam is losing energy while traveling in the gas target, a wide range of reaction energies can be measured simultaneously and without changing the accelerator parameters. The difficulty of this particular experiment lies on the fact that we are trying to detect one single proton from the 18Ne(α,p)21Na reaction per event. Proton background is caused by fusion evaporation reactions of the 18Ne with the CO2 quenching gas added on the 4He target gas. For the first time in the ANASEN setup, we have implemented a cylindrical Ion Chamber for coincident heavy-recoil detection, which was successfully used to suppress such background events. The 18Ne(α,p)21Na cross section was measured in the context of this dissertation. The experiment allows for a determination of the cross section down to reaction energies ∼2 MeV in the center-of- mass system. The results are compared to the previous (α,p) reaction measurement, as well as to the time-inverse (p,α) reaction measurement and theoretically calculated cross sections. Our work resolves significant inconsistencies between the experimental information on the 18Ne(α,p) reaction and the indirect information available, giving larger credence to the use of such indirect methods. At the same time, more sensitive measurements of the 18Ne(α,p) reaction are needed to provide experimental information on the reaction energies below 2 MeV, most important for the break-out phase of X-ray bursts. The experimental techniques developed in this work would have to be applied to a beam of 18Ne with significantly higher quality and intensity.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**July 9, 2019.

**NOTE (Keywords):**astrophysics, experimental, nuclear

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

**NOTE (Advisory Committee):**Ingo Ludwig Wiedenh¨over, Professor Directing Dissertation; Thomas Albrecht-Schmitt, University Representative; Kevin Huﬀenberger, Committee Member; Mark Riley, Committee Member; Alexander Volya, Committee Member.

**SUBJECT:**Nuclear physics

**DEGREE:**Doctoral

## Record number: 9

**FILENAME:**Annie\_fsu\_0071E\_15280.pdf

**TITLE:**Structural Health Outcomes in the Appalachian Region

**AUTHOR:**Annie, Frank H. (Frank Harrison)

**MEMBER (professor directing dissertation):**Uejio, Christopher K.

**MEMBER (university representative):**Taylor, John

**MEMBER (committee member):**Horner, Mark W.

**MEMBER (committee member):**Zhao, Tingting, (Geography Porfessor)

**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 (140 pages)

**ABSTRACT:**This dissertation investigates the overall impact of chemical exposure, health care disparities, and current health care issues facing the Appalachian Region of the United States while adding to the research of human disease ecology and essential health care delivery. Moreover, it is structured as a three-paper model with a thorough exploration of theoretical frameworks connected to existing Geography texts. The research sections discuss illicit drug use and its effect on sepsis cases, the impact of dioxins and other chemicals on low birth weight, and cancer patient survival based on insurance status. This dissertation, thus, explores themes of access to health care and toxin exposure. Chapter 2 concerns illicit drug use and the resulting complications, such as sepsis, which have been increasing in the Appalachian Region for the last 15 years. Illicit drug–related sepsis is commonly caused by using contaminated syringes and improper injection techniques that can also lead to multiple other health concerns. Untreated infections, for instance, may increase the risk of premature mortality. Drug-related sepsis cases at the Charleston Area Medical Center in Charleston, West Virginia, have risen from 50 cases in 2007 to 252 cases in 2015. This section was published in the Cureus Journal of Medical Science. Chapter 3 analyzes dioxins, a group of chemical compounds with deleterious health effects, in the same study region. “Dioxin” refers to a chemical by-product generated by the manufacture of multiple products such as rubber and synthetic plastic (Gibbs, 1997). In the study area, the chemical’s production peaked during the 1950s and ended in the early 1970s. The goal of this study is to establish whether dioxin or 2,3,7,8-Tetrachlorodibenzodioxin (TCDDS) affected low birth weight in the county containing the factory during times of high production and potential exposure. The study therefore analyzes birth weight data from Kanawha County, West Virginia, from 1955 to 1970. This study found a suggestive relationship between an increase of dioxin from the production of Agent Orange (2,4,5-T) (see Appendix) and an acute increase of low birth weight in Kanawha County, West Virginia (P = 0.042). The final Chapter 4, also published in the Cureus Journal of Medical Science, studies potential health care disparities in at-risk populations, which are poorly understood in the Appalachian Region of the United States. The goal of this study is to examine how different types of insurance coverage (i.e., private insurance, Medicare under age 65, Medicare age 65 or over, Medicaid, and self-pay) may modify cancer survival over time. This study separately analyzes colon cancer, bladder cancer, and anal, rectal, and esophageal cancers. Overall this study suggests that insurance category did not modify colon cancer survival after controlling for other risk factors. In many ways, this dissertation expands the knowledge of health care within the Appalachian Region over an extended time frame and thus seeks to explore differing challenges using the tools and theoretical frameworks found within the field of Geography.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Health Access, Health Delivery

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

**NOTE (Advisory Committee):**Christopher K. Uejio, Professor Directing Dissertation; John Taylor, University Representative; Mark Horner, Committee Member; Tingting Zhao, Committee Member.

**SUBJECT:**Geography

**DEGREE:**Doctoral

## Record number: 10

**FILENAME:**Aryal\_fsu\_0071E\_15363.pdf

**TITLE:**Topological Materials and Their Interfaces

**AUTHOR:**Aryal, Niraj

**MEMBER (professor directing dissertation):**Manousakis, Efstratios

**MEMBER (university representative):**Dalal, Naresh S.

**MEMBER (committee member):**Bonesteel, N. E.

**MEMBER (committee member):**Berg, Bernd A.

**MEMBER (committee member):**Balicas, Luis

**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 (102 pages)

**ABSTRACT:**This dissertation is a theoretical and computational examination of electronic properties of topological materials, such as topological insulators and Weyl semimetals. Our work is motivated by various experimental observations and theoretical predictions about the presence of exotic electronic properties and transport phenomena in different topological materials. These materials have been a subject of intense research since last decade because their low-energy dispersion can be described by Dirac and Weyl equations and they are predicted to have many exciting properties of both fundamental and practical significance. In this dissertation, we examine theoretical predictions and experimental measurements using density functional theory (DFT) based methods and using calculations based on a model Hamiltonian. In the first half of this dissertation, we present our detailed results for the Weyl semimetal candidate T$\_d$-MoTe$\_2$ using DFT and DFT+U methods while making careful comparison to different experiments in order to validate our results. We also address the fate of the Weyl fermions as a function of the Hubbard U using both DFT and a model Hamiltonian approach. Moreover, from our calculations, we predict that the system could be in close vicinity of a Lifshitz transition. Such a prediction can be experimentally verified by means of doping or electrostatic gating. In the second half of this dissertation, we present our results for the surface and interface states of the prototypical topological insulator material Bi$\_2$Se$\_3$. We study interfaces of the topological insulator with different conventional insulators using both DFT and model Hamiltonian calculations and examine the fate of the topological states at the interface. Moreover, we predict the occurrence of a topological phase transition in the interface geometry from our calculations and point towards a few directions where some of these predictions could be verified experimentally. We conclude by presenting implications for further work.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Berry Phase, Density Functional Theory, Interface, Model Hamiltonian, Topological Insulator, Weyl semimetal

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

**NOTE (Advisory Committee):**Efstratios Manousakis, Professor Directing Dissertation; Naresh S. Dalal, University Representative; Nicholas E. Bonesteel, Committee Member; Bernd A. Berg, Committee Member; Luis Balicas, Committee Member.

**SUBJECT:**Condensed matter

**SUBJECT:**Materials science

**DEGREE:**Doctoral

## Record number: 11

**FILENAME:**Bagdasarian\_fsu\_0071N\_15445.pdf

**TITLE:**Quantitative Analysis of Aggregated Human Mesenchymal Stem Cell Spheroids Applied to a Rodent Model of Ischemic Stroke Using 1H and 23Na MRI at 21.1 T

**AUTHOR:**Bagdasarian, Frederick Andrew

**MEMBER (professor directing thesis):**Grant, Samuel C.

**MEMBER (committee member):**Holmes, Christina A. (Christina Andrea)

**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 (74 pages)

**ABSTRACT:**High field 1H and 23Na MRI provide sensitive metrics of quantifying ischemic stroke over time. In this work, the efficacy of human mesenchymal stem cells (hMSC) aggregated into 3D spheroids (a-hMSC) as a treatment method for ischemic stroke in a rat model was assessed. High resolution fast spin echo (FSE) 1H and gradient recalled echo (GRE) 23Na images were acquired using the 21.1-T, 900-MHz MRI scanner located at the National High Magnetic Field Laboratory in order to elucidate evolving volumetric changes as a result of a-hMSC versus control treatments following ischemic insult. Significant changes were observed in sodium with a-hMSC transplantation, which was supported by observed improvement trends in asymmetric behavior. Histology showed the a-hMSC treatment decreased astrocytic activity, preserved mature neurons and stimulated migration of neuroprogenitor cells differentiating primarily into neurons instead of other cell types. The work presented qualifies a-hMSC as a viable candidate for further study as an implant to treat ischemic stroke, and further validates 23Na MRI as an efficient and sensitive biological metric for evaluating therapeutic efficiency at the cellular level.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**aggregate, hMSC, MRI, sodium

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

**NOTE (Advisory Committee):**Samuel C. Grant, Professor Directing Thesis; Christina A. Holmes, Committee Member; Jingjiao Guan, Committee Member.

**SUBJECT:**Biomedical engineering

**SUBJECT:**Neurosciences

**DEGREE:**Masters

## Record number: 12

**FILENAME:**Bandak\_fsu\_0071E\_15312.pdf

**TITLE:**Microfluidic-Enabled Quantitative Measurements of Insulin Release Dynamics from Single Pancreatic Islets of Langerhans

**AUTHOR:**Bandak, Basel

**MEMBER (professor directing dissertation):**Roper, Michael Gabriel

**MEMBER (university representative):**Fajer, Piotr G.

**MEMBER (committee member):**Bleiholder, Christian

**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 (121 pages)

**ABSTRACT:**The work in this dissertation presents a microfluidic method for the quantitative measurement of insulin secretion rates and patterns from single pancreatic islets of Langerhans. Proper release of insulin from islets is essential for maintaining glucose homeostasis. For full efficacy, both the pattern and the amount of hormone release are critical. It is therefore important to understand how insulin levels are secreted from single islets in both a quantitative fashion and in a manner that resolves temporal dynamics. Although several systems have been described for high time resolution measurements, many are limited in their ability to quantify release. Previous microfluidic systems for single islet hormone secretion measurements used pressure-driven perfusion systems to deliver glucose solutions to an islet chamber and sampled secretions by electroosmotic flow (EOF). Because of a discrepancy in these flow rates, only a small fraction of the secretions was sampled. Experimental variables, such as islet proximity to the sampling channel, can alter that percentage, hindering islet-to-islet comparisons of insulin measurements. Using finite element analysis, a microfluidic system was designed that ensured cellular secretions were homogenized (RSDs < 3%) prior to sampling, permitting quantitative monitoring of insulin and examination of inter-islet biological variability. Using the new design, the system was tested with standard insulin solutions and demonstrated RSDs of < 2% as well as a detection limit of 10 nM insulin, low enough for single islet sampling. The application of this system to monitor insulin release from murine islets demonstrated biphasic secretory rates and dynamics that were in good agreement with other reports. Single islets from healthy and T2DM human donors were also sampled, and with this system, blunted phase 1 peaks and lower secretion rates were quantified in the diseased samples compared with the healthy donor samples. Chronically elevated levels of lipids have been associated with insulin resistance and impaired insulin secretion. Using this quantitative microfluidic system, the acute and chronic effects of two classes of lipids were investigated: palmitic acid, a free fatty acid (FFA), and 5-palmitic acid hydroxy stearic acid (5-PAHSA), which is a member of the novel fatty acid hydroxy fatty acid (FAHFA) class of lipids that are upregulated in non-diabetic individuals. Acute exposure of these two classes of lipids to islets induced elevated secretion rates, consistent with published reports. Chronic incubation (48-h) with 5-PAHSA significantly augmented glucose-stimulated insulin secretion (GSIS) rates and dynamics at the single islet level compared to chronic incubation without the lipid. Incubation in the presence of palmitic acid (PA) resulted in impaired insulin release, as characterized by lower release rates and the loss of pulsatility. The studies were continued in human islets from both healthy and type 2 diabetes mellitus (T2DM)-diagnosed donors. Total amounts of GSIS were not only augmented in islets that were chronically incubated with 5-PAHSA, but the dynamic insulin release profiles also improved as noted by more pronounced insulin oscillations. With this quantitative microfluidic system, the anti-diabetic effects of 5-PAHSA were corroborated by demonstrating improved islet function after chronic incubation with this lipid via improved oscillatory dynamics along with higher basal and peak release rates. It has been shown that cellular stress derived from reactive oxygen species (ROS) plays a critical role in the impairment and apoptosis of insulin secreting cells. A microfluidic analytical method has been developed that permits the simultaneous measurements of real-time oxidative stress dynamics with insulin release patterns from single murine islets in vitro. A redox-sensitive biosensor (Grx1-roGFP2) was virally delivered to islets of Langerhans and selectively expressed in β-cells. The ratiometric fluorescence output of the biosensor was utilized to image intracellular ROS dynamics in response to extracellular stimuli, simultaneously with insulin release patterns using a microfluidic dual microscopy system. Single islets were loaded on the microfluidic device and stimulated with 11 mM glucose while ROS and insulin levels were measured simultaneously. The resulting secretory profile of insulin was biphasic, in which the first phase response was observed with a duration of 5-10 min, followed by second phase oscillations with periods of 3-5 min. The biosensor fluorescence also exhibited similar dynamic profiles, with the fluorescence ratio rapidly increasing during first phase insulin release and showing pulsatility that was synchronized with insulin oscillations in second phase release. Dynamic stimulations of infected islets with 20 mM glucose from 11 mM levels also showed a dose-dependent response in the redox state of islet β-cells. These results suggest that ROS generation is associated with insulin release dynamics and highlight the potential role of ROS in insulin release signaling. The experimental method presented here is amenable to the quantitative examination of acute changes of other intracellular metabolites simultaneously with the release of other hormones.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**June 24, 2019.

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

**NOTE (Advisory Committee):**Michael G. Roper, Professor Directing Dissertation; Piotr G. Fajer, University Representative; Christian Bleiholder, Committee Member; Scott Stagg, Committee Member.

**SUBJECT:**Chemistry

**SUBJECT:**Biochemistry

**DEGREE:**Doctoral

## Record number: 13

**FILENAME:**Barnaby\_fsu\_0071E\_15328.pdf

**TITLE:**Mathematical Models of Prostate Cancer Progression and Response to Treatment

**AUTHOR:**Barnaby, Johnna Pauline

**MEMBER (professor directing dissertation):**Jain, Harsh Vardhan

**MEMBER (university representative):**Sang, Qing-Xiang

**MEMBER (committee member):**Bertram, R. (Richard)

**MEMBER (committee member):**Cogan, Nicholas G.

**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 (95 pages)

**ABSTRACT:**Prostate cancer is currently a major pubic health issue due to the fact that it is the second most common cancer in men with an estimated 174,650 new cases diagnosed in 2019. While prostate cancer has a survival rate of nearly 100% for localized cancer that number quickly drops once the tumor has metastasized. Treatments for this metastasized state have shown varied response based on the phenotype of the tumor. Additionally, studies have show that the biomarker used to determine response to treatment, PSA, is an inadequate indicator of tumor progression and response to treatment. I propose two ODE models of prostate cancer and response to treatment that try to quantify these two diculties in treating prostate cancer. In the rst, I model blood vessel formation within the tumor to better understand the mechanisms by which PSA is able to leak into the blood, and how this may not correlate to tumor burden. I further extend this model to the human case where tumor volume is usually unknown. In the second model I explore combinations of treatments with androgen deprivation therapy and an immunotherapy vaccine. I propose a model of tumor and immune cell dynamics after treatment with androgen deprivation therapy. I then include additional treatment with a vaccine. With the aid of this model I simulate tumor response to various combinations of treatments, and determine an optimal treatment protocol. I also explore how resistance to androgen deprivation therapy may aect the ecacy of the vaccine. These models give a better understanding of tumor response to treatment. Conclusions from these models can aid with optimizing treatment response.

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

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

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

**NOTE (Keywords):**immunology, mathematical models, prostate cancer

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

**NOTE (Advisory Committee):**Harsh V. Jain, Professor Directing Dissertation; Qing-Xiang Amy Sang, University Representative; Richard Bertram, Committee Member; Nicholas G. Cogan, Committee Member.

**SUBJECT:**Mathematics

**DEGREE:**Doctoral

## Record number: 14

**FILENAME:**Baumanis\_fsu\_0071E\_15409.pdf

**TITLE:**The Comprehensive Conductor: A Supplemental Text to the Instrumental Conductor Curriculum

**AUTHOR:**Baumanis, Julia L. (Julia Lauren)

**MEMBER (professor co-directing dissertation):**Madsen, Clifford K.

**MEMBER (professor co-directing dissertation):**Dunnigan, Patrick, 1957-

**MEMBER (university representative):**Bish, Deborah, 1971-

**MEMBER (committee member):**Clary, Richard

**MEMBER (committee member):**Geringer, John M.

**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 (74 pages)

**ABSTRACT:**Since the 1940s, conducing has been a mainstay in the undergraduate instrumental music education curriculum in the United States. One of the purposes of instrumental conducting courses is to prepare students for the occupation of band director after graduation. While these courses are offered in most music education degree programs, they often mainly focus on baton technique and score study, leaving topics important to the education of future band directors out of the curricula. Much of the research on conducting class curricula cites one main cause of above- there are many topics to cover in conducting class curricula, and simply not enough time to cover them all. Therefore, the purpose of this document is to offer focus on topics important to but often left out of the conducting class curricula. This supplemental text is divided into three parts, 1) verbal communication in rehearsal techniques, 2) nonverbal communication in conducting, and 3) technology in the conducting classroom. Each part offers a brief overview of the literature on that specific topic, as well as focuses on one, measurable pinpointed topic in that area, including teaching verbal communication in rehearsal techniques through observation and a systemized methodology for conductor nonverbal communication instruction. Resources for implementing pinpointed topics are also provided. The result of this document offers multiple ways in which to incorporate each topic into existing conducting class curriculum, thus providing a more comprehensive conducting education.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Conducting, Conductor Instruction, Conductor Technology, Nonverbal Communication, Rehearsal Techniques

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

**NOTE (Advisory Committee):**Clifford Madsen, Professor Co-Directing Dissertation; David Patrick Dunnigan, Professor Co-Directing Dissertation; Deborah Bish, University Representative; Richard Clary, Committee Member; John Geringer, Committee Member; William Fredrickson, Committee Member.

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

**DEGREE:**Doctoral

## Record number: 15

**FILENAME:**Bayousef\_fsu\_0071E\_15377.pdf

**TITLE:**A Computational Investigation of the Optimal Halton Sequence in Qmc Applications

**AUTHOR:**Bayousef, Manal Sarhan

**MEMBER (professor directing dissertation):**Mascagni, Michael

**MEMBER (university representative):**Duke, D. W. (Dennis W.)

**MEMBER (committee member):**Liu, Xiuwen, 1966-

**MEMBER (committee member):**Yuan, Xin, Ph. D

**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 (103 pages)

**ABSTRACT:**We propose the use of randomized (scrambled) quasirandom sequences for the purpose of providing practical error estimates for quasi-Monte Carlo (QMC) applications. One popular quasirandom sequence among practitioners is the Halton sequence. However, Halton subsequences have correlation problems in their highest dimensions, and so using this sequence for high-dimensional integrals dramatically affects the accuracy of QMC. Consequently, QMC studies have previously proposed several scrambling methods; however, to varying degrees, scrambled versions of Halton sequences still suffer from the correlation problem as manifested in two-dimensional projections. This paper proposes a modified Halton sequence (MHalton), created using a linear digital scrambling method, which finds the optimal multiplier for the Halton sequence in the linear scrambling space. In order to generate better uniformity of distributed sequences, we have chosen strong MHalton multipliers up to 360 dimensions. The proposed multipliers have been tested and proved to be stronger than several sets of multipliers used in other known scrambling methods. To compare the quality of our proposed scrambled MHalton sequences with others, we have performed several extensive computational tests that use $L\_2$-discrepancy and high dimensional integration tests. Moreover, we have tested MHalton sequences on Mortgage-backed security (MBS), which is one of the most widely used applications in finance. We have tested our proposed MHalton sequence numerically and empirically, and they show optimal results in QMC applications. These confirm the efficiency and safety of our proposed MHalton over scrambling sequences previously used in QMC applications.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Correlation, Discrepancy, Optimal Halton, Permutations, Quasi-Monte Carlo, Scrambling

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

**NOTE (Advisory Committee):**Michael Mascagni, Professor Directing Dissertation; Dennis Duke, University Representative; Xiuwen Liu, Committee Member; Xin Yuan, Committee Member.

**SUBJECT:**Computer science

**DEGREE:**Doctoral

## Record number: 16

**FILENAME:**Bedard\_fsu\_0071E\_15404.pdf

**TITLE:**Decision-Making for Law Enforcement Officers: Can “Brain-Training” Develop Critical Decision-Making Skills?

**AUTHOR:**Bedard, Roy R.

**MEMBER (professor directing dissertation):**Tenenbaum, Gershon

**MEMBER (university representative):**Boot, Walter Richard

**MEMBER (committee member):**Chow, Graig Michael

**MEMBER (committee member):**Gabana, Nicole T.

**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 (120 pages)

**ABSTRACT:**Decision-making (DM) efficacy is influenced by several factors including development of perceptual-cognitive skills (PCS) that underpin DM processes. In the current study I have examined the effect of a “brain-training” method using Neuro-Tracker (i.e., a three-dimensional moving object tracker;3D-MOT) which aimed at improving law enforcement officers PCS on decision-making capability. Forty elite law enforcement officers completed a pre-posttest experiment on a video based simulated task environment (STE) to establish baseline scores for situational awareness, anticipation and DM skills. Participants were randomly assigned to one of three conditions (i.e. treatment, active control and no-contact). The treatment participants trained on the 3D-MOT over a period of three-weeks. The active control read articles and answered questions on the readings during that same time period. A no-contact control condition was used to control for learning effects on the STE. Pre- and post-testing was scored by five police procedures subject-matter-experts. Inspection of the DM Scores shows a descriptive trend where by the Passive Control participants showed an average decline in DM Total Score, the Active Control participants remained unchanged while the 3D-MOT participants showed slight increase. An occlusion paradigm was administered to more closely examine situational awareness and anticipation. On average, the participants in the three experimental conditions improved in situational awareness across experimental conditions and in anticipation However, neither the experimental condition nor its interaction with time resulted in significant effect. The nonsignificant results are discussed within the general-specific transfer conceptual framework and future directions are introduced.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**3D-MOT, anticipation, decision making, perceptual-cognitive skills, Police, situational awareness

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

**NOTE (Advisory Committee):**Gershon Tenenbaum, Professor Directing Dissertation; Walter R. Boot, University Representative; Graig Chow, Committee Member; Nicole Gabana, Committee Member.

**SUBJECT:**Educational psychology

**DEGREE:**Doctoral

## Record number: 17

**FILENAME:**Bernat\_fsu\_0071N\_15387.pdf

**TITLE:**Synthesis and Characterization of Silica-Coated Iron(II, III) Oxide Magnetic Particles for Potential Application in Glyphosate Detection

**AUTHOR:**Bernat, Andrea

**MEMBER (professor directing thesis):**Rao, Qinchun, 1974-

**MEMBER (committee member):**Singh, Prashant

**MEMBER (committee member):**Yang, Wei

**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 (94 pages)

**ABSTRACT:**The main active ingredient in herbicide formulations on the market today is glyphosate. Glyphosate is applied to the majority of crops in the food industry. However, claims regarding glyphosate's toxicity and role in human diseases, such as cancer, are increasing. Thus, the detection of glyphosate in foods is imperative to ensure consumer safety. To improve the specificity and selectivity of detection, a focus on sample preparation methods to concentrate glyphosate and remove it from the food matrix for next-step detection is crucial. Thus, the objectives of this study were to (1) synthesize and coat Fe3O4 magnetic particles, (2) characterize the magnetic particles to determine the optimal coating concentration, and (3) construct glyphosate-specific molecularly imprinted polymers (GLY-MIPs) with the optimally coated Fe3O4 magnetic particles, which may have the ability to concentrate glyphosate and draw it out of the surrounding matrix for potential glyphosate detection. Iron(II, III) oxide magnetic particles (Fe3O4 MPs) were synthesized via co-precipitation at room temperature (RT). A modified Stöber method was used to coat Fe3O4 MPs with tetraethyl orthosilicate (TEOS). Particle size was determined using dynamic light scattering (DLS). The zeta-potential, the charge that develops at the interface between a solid surface and its liquid medium, was also investigated via DLS measurements. Light microscopy imaging was performed to study particle morphology and aggregation. The effect of temperature and pH on particle precipitation and the attraction of uncoated Fe3O4 MPs and silica-coated Fe3O4 MPs (Fe3O4@SiO2 MPs) to the external magnetic field were investigated to aid in determining the optimal TEOS coating concentration. Glyphosate-imprinted polymers and non-imprinted polymers (NIPs) with Fe3O4@SiO2 MPs as the core were constructed via free radical polymerization (18 h, 60°C). Particle size and zeta-potential of four coated Fe3O4@SiO2 MP samples with TEOS coating concentrations 0.067, 0.34, 1.7, 3.3 mL/g Fe3O4 were obtained, respectively. Fe3O4@SiO2 MPs with TEOS coating concentration 1.7 mL/g Fe3O4 were significantly smaller (P < 0.05) than Fe3O4@SiO2 MPs with TEOS coating concentrations 0.067, 0.34, and 3.3 mL/g Fe3O4 (P < 0.05). Also, Fe3O4@SiO2 MPs with TEOS coating concentration 3.3 mL/g Fe3O4 were significantly larger (P < 0.05) than Fe3O4@SiO2 MPs with TEOS coating concentrations 0.067, 0.34, and 1.7 mL/g Fe3O4. In addition, Fe3O4@SiO2 MPs with TEOS coating concentrations 1.7 and 3.3 mL/g Fe3O4 had a significantly greater negative zeta-potential (mV) than Fe3O4@SiO2 MPs with TEOS coating concentrations 0.067 and 0.34 mL/g Fe3O4, indicating stability of the aforementioned Fe3O4@SiO2 MPs in colloidal suspension. Light microscopy imaging results showed aggregated uncoated Fe3O4 MPs. Also, coated Fe3O4@SiO2 MPs were shown to be less aggregated than uncoated Fe3O4 MPs. However, as the coating concentration increased, particle size and aggregation increased as well. An increase in aggregation may have resulted due to the coating of amorphous, non-uniform Fe3O4 MPs. Increasing temperature (37°C), increased the precipitation rate of uncoated Fe3O4 MPs and coated Fe3O4@SiO2 MPs suspended in degassed Distilled Deionized (DD) water, glycine-HCl (pH 2.5), PBS (pH 7.2), and Tris-HCl (pH 10). Fe3O4@SiO2 MPs with TEOS coating concentration 3.3 mL/g Fe3O4 displayed the most stability in colloidal suspension at RT and 37°C. The effect of pH on the precipitation rate of uncoated Fe3O4 MPs and coated Fe3O4@SiO2 MPs showed the stability of Fe3O4@SiO2 MPs with TEOS coating concentration of 3.3 mL/g Fe3O4 in colloidal suspension at acidic and basic pH. All uncoated Fe3O4 MPs and coated Fe3O4@SiO2 MPs did not show stability in colloidal suspension at a pH near the isoelectric point (pI) of Fe3O4. Fe3O4@SiO2 MPs with TEOS coating concentrations 1.7 and 3.3 mL/g Fe3O4 did not attract to an external magnetic field as rapidly as compared to Fe3O4@SiO2 MPs with TEOS coating concentrations 0.067, 0.34, 10, 13, 17, 25, 50 mL/g Fe3O4 because of their stability in colloidal suspension. Fe3O4 MPs and Fe3O4@SiO2 MPs with TEOS coating concentrations 0.34 and 3.3 mL/g Fe3O4 migrated in a 0.5% agarose gel. Through comprehensive characterization, the optimal TEOS coating concentration of the Fe3O4@SiO2 MPs tested was 3.3 mL/g Fe3O4 due to its particle size, zeta-potential, stability in colloidal suspending against pH and temperature, ability to attract to an external magnetic field, and migration in agarose gel electrophoresis. Glyphosate-imprinted polymers and NIPs were constructed with Fe3O4@SiO2 MPs with TEOS coating concentration 3.3 mL/g Fe3O4. The attraction of GLY-MIPs to an external magnetic field was quicker than the attraction of NIPs to an external magnetic field. This work serves as a basis for future optimization and application of magnetic glyphosate-imprinted polymers and the detection of glyphosate in foods.

**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):**Summer Semester 2019.

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

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

**NOTE (Advisory Committee):**Qinchun Rao, Professor Directing Thesis; Prashant Singh, Committee Member; Wei Yang, Committee Member.

**SUBJECT:**Food

**DEGREE:**Masters

## Record number: 18

**FILENAME:**BettsGreen\_fsu\_0071E\_15189.pdf

**TITLE:**“We Could Do Better”: The Presence, Absence, and Librarian Perceptions of Lesbian, Gay, Bisexual, Transgender, and Queer Resources in Small and Rural Public Libraries in Alabama

**AUTHOR:**Betts-Green, Crystal Dawn

**MEMBER (professor directing dissertation):**Latham, Don, 1959-

**MEMBER (university representative):**Doan, Petra L., 1955-

**MEMBER (committee member):**Kazmer, Michelle M.

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**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 (158 pages)

**ABSTRACT:**Although the LGBTQ community, from all appearances, maintains a strong connection to libraries as safe spaces, it is unclear whether the libraries themselves are providing relevant resources and services to the community. In addition, LIS research on LGBTQ patrons has centered on collection development how-tos and high level, broad suggestions without evaluating the actual state of the libraries’ resources and services to these patrons. And even in the research that has considered small or rural libraries, none have focused on the rural and small town Southern U.S., which data has shown is the most inhospitable of regions in the U.S. for LGBTQ individuals. The purpose of this research was to explore the status of LGBTQ collections, particularly young adult collections, in rural and small libraries in Alabama and determine whether the librarians and staff in charge of these collections have an accurate view of what exists there. In addition, the research sought to discover whether there are active efforts to maintain and/or improve these collections and provide services to the LGBTQ community. In this project, I used two qualitative methods: content analysis of library catalogs and interviews. Seventy-seven library catalogs of small and rural libraries in Alabama were examined, and five librarians from this set of libraries were interviewed. I used open coding to analyze the interviews and used this in concert with the catalog data to build a picture of what the actual state of small and rural libraries in Alabama is. In the analysis, I found that the libraries, while they did have varying sizes of collections do contain some LGBTQ resources though the use of subject headings is inaccurate and vague in many cases. In addition, through the interview analysis, I found that what primarily affected what the libraries had on their shelves was an actively engaged librarian dedicated to proper collection development practices. This was exploratory research designed to create a foundation for future inquiry into the state of small and rural libraries in the U.S. South, something which has not been fully explored in LIS literature. Future research will be needed to better determine motivations and best practices for the larger group.

**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 25, 2019.

**NOTE (Keywords):**Alabama Libraries, LGBTQ, Rural and Small Libraries

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

**NOTE (Advisory Committee):**Don Latham, Professor Directing Dissertation; Petra Doan, University Representative; Michelle Kazmer, Committee Member; Howard Rodriguez-Mori, Committee Member.

**SUBJECT:**Library science

**SUBJECT:**Sexual minorities

**DEGREE:**Doctoral

## Record number: 19

**FILENAME:**Bhattacharya\_fsu\_0071E\_15258.pdf

**TITLE:**A Novel Approach for Ai Based Driver Behavior Analysis Model Using Visual and Cognitive Data

**AUTHOR:**Bhattacharya, Sylvia

**MEMBER (professor directing dissertation):**Bernadin, Shonda

**MEMBER (university representative):**Sobanjo, John Olusegun, 1958-

**MEMBER (committee member):**Foo, Simon Y.

**MEMBER (committee member):**Roberts, Rodney G.

**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 (106 pages)

**ABSTRACT:**In recent years there has been increasing research on incorporating intelligent driver assistance systems (IDAS) into vehicular platforms to help drivers make better driving decisions and to make the roadways safer. The percentage of highway accidents in United States is steadily increasing every year. Current IDAS such as collision detection and avoidance systems use models of human behavior to improve the reliability of these systems and to help decrease driver workload. Modeling driver behavior is not a simple task. It involves aspects of psychology, physiology, data analysis, signal processing and engineering, to name a few. In the case of lane changing events, early detection of a driver’s intent to change lanes can be beneficial to systems that involve vehicle- to- vehicle communications. Moreover, a lane change prediction system, could be integrated into automatic aviation of the turn signal. Most published studies of lane change events are based on large scale vehicle trajectory data i.e steering angle, velocity and accelerations. Using this approach, a lane change prediction event is typically detected as soon as the driver initiates a lane change maneuver. Most vehicular trajectory model fails when a driver forgets to enable a turn signal before making a lane change. Hence, irrespective of having many automatic features equipped in modern day cars, the accident rate is still not decreasing. In such cases, biomedical signals may play an important role in detecting early driver intention. Besides vehicle dynamics (lane change, braking, acceleration), it is also important to understand the mental workload of the driver to maintain safety while travelling. Mental workload is directly related to distracted or non- distracted driving which varies with emotional changes. The mental workload can tremendously impact driving behavior and hence the detection of these factors will add driver safety on roadway. In this dissertation, we propose to utilize visual and cognitive information to detect a driver’s intent to change lanes and predict their mental distraction. Mental workload varies in different situations. For example, the amount of focus required during a lane change maneuver can be disrupted due to a secondary task like cell phone usage, talking to a co-passenger, a baby crying in the back seat or an unexpected news broadcasted on the car radio. Most of the research focuses on distracted driving using a cell phone, although more number of accidents are accounted on highways during talking to passengers. In this research, conversational task with co –passengers are considered as a situation, for intent analysis and cognitive workload analysis of the driver. A novel approach is developed that considers eye movements and cognitive attentiveness as distraction levels are increased during two different scenarios (i) single passenger driving and (ii) driving with passengers. This involves aspects of statistical analysis, signal processing, software engineering and machine learning techniques. Different types of statistical analysis techniques like normalization, correlation models are used in this research. Software development with TCL scripting is utilized to design real time virtual scenario for data collection. Signal Processing techniques like power spectral analysis, cognitive engagement ratio etc. are utilized to analyze brain signals. Artificial Intelligence methods are applied to help make accurate predictions of driver intent. Finally, Artificial Intelligence is a broad field that uses deep learning and machine learning algorithms to mimic human cognition. This research utilizes innovative machine learning tools like sklearn and tensor flow, to automate the process of behavior analysis. This work will inform research on lane-change prediction, behavior prediction and vehicular feedback analysis using an IDAS environment. Furthermore, this work considers factors that may impact the lane change detection and prediction of differential drivers including elderly drivers. This work also contributes an individual database that records driving behaviors during conversational tasks that other researchers can use to conduct behavior analysis research associated with this driving scenario. To author’s knowledge this is the first database that will be made available publicly for use in conversational task scenario in driving. This dissertation is composed of five chapters. Chapter 1 presents the introduction and back ground of IDAS research. It highlights various factors that contribute to detrimental road crashes and describes the research gap in this field. Chapter 2 includes a detailed literature review of all the studies that has been conducted in this field and also includes essential biological and artificial intelligence methods that are important to know in order this field. Chapter 3 outlines the methodology that has been adopted in this project. It includes description of virtual reality development procedure for collecting data from driver simulator, data collection procedure for various parameter in this research and also describes the mathematical models of each concept. Chapter 4 consists of results, discussion and the importance of novel distraction recognition algorithm. Finally, conclusion, limitations and future work are discussed in chapter 5.

**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):**Summer Semester 2019.

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

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

**NOTE (Advisory Committee):**Shonda Bernadin, Professor Directing Dissertation; John Sobanjo, University Representative; Simon Foo, Committee Member; Rodney Roberts, Committee Member.

**SUBJECT:**Electrical engineering

**DEGREE:**Doctoral

## Record number: 20

**FILENAME:**Bhattarai\_fsu\_0071E\_15131.pdf

**TITLE:**Understanding Multi-Physics of Quench in “No-Insulation” Rare Earth Barium Copper Oxide Superconducting Magnets

**AUTHOR:**Bhattarai, Kabindra Ram

**MEMBER (professor directing dissertation):**Hahn, Seung Yong

**MEMBER (university representative):**Pamidi, Sastry V.

**MEMBER (committee member):**Larbalestier, D. (David)

**MEMBER (committee member):**Kametani, Fumitake

**MEMBER (committee member):**Guo, Wei, (Professor of Mechanical Engineering)

**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 (93 pages)

**ABSTRACT:**Electromagnets are an important application of superconductivity as superconductors can provide large current density in the winding pack without any voltage drop or joule heating losses. High temperature superconducting (HTS) magnets have advantages over low temperature superconducting (LTS) magnets, particularly because HTS magnets have better stability and possibility of producing magnetic field higher than 20 T. However, protection of HTS magnets is challenging due to slow normal zone propagation (NZP). When the NZP is slow, the stored magnetic energy is dissipated at localized area where the hot spot temperature can rise significantly and can cause "burn-out" damage on the superconductor. The no-insulation (NI) HTS winding technique has been experimentally demonstrated to be a promising technology, particularly to prevent a coil from electric burn-out, and has made it possible to reach a magnetic field of 45.5 T at the magnet center. NI magnets are dry wound and this adds to the ease in construction of NI coils as difficult epoxy impregnation process or wet winding process can be eliminated. The lack of insulation makes the magnet compact due to larger engineering current density, Je. Je of up to 1580 A/mm2 has been reported in NI coils, which is significantly larger than observed in insulated counterparts. The lack of low strength insulation also makes the magnet robust. NI winding using REBCO does not require processing steps such as epoxy impregnation or heat treatment, making its construction faster and convenient. However, as seen from the evidences of mechanical damage (seen from microscopy and critical current measurement) on the 45.5 T insert coil, there is a limit to this otherwise exciting technology. This research explores, in both simulation and experiment, the post-quench behaviors of NI magnets to quantitatively understand their self-protecting mechanism. NI quench modeling is challenging due to its non-linear, extremely fast and interrelated multiphysical behavior. A lumped circuit model combined with heat transfer and solid mechanics models is used to explain electrical, thermal, and mechanical responses in detail at the magnet level. In this model, each subcoil is modeled as single inductor (L 􀀀M) with variable resistances in series (Rq) and in parallel (Rc). For this purpose, some magnets that have been constructed and quenched at 4.2 K are being analyzed, which are 1) a stack of 3 double-pancake (DP) coils, 2) 14.5 T insert in 31 T resistive magnet, 3) 2 DP insert in 31 T resistive magnet, 4) 7 T standalone magnet, 5) 26 T standalone magnet, 6) 13 T HTS insert in 7 T background LTS magnet. The lessons learned from analysis of these magnets are presented in this work. The quench modeling allows us to look at temperature and stress in the magnet that are difficult to measure, but are important to make sure damages due to burn-out or overstraining do not occur during operation. With the lessons learned, this approach can now be used for future design of high field magnets to make sure mechanical damage during the magnet quench is prevented.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**May 28, 2019.

**NOTE (Keywords):**HTS, no-insulation, protection, quench, REBCO

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

**NOTE (Advisory Committee):**Seungyong Hahn, Professor Directing Dissertation; Sastry Pamidi, University Representative; David Larbalestier, Committee Member; Fumitake Kametani, Committee Member; Wei Guo, Committee Member.

**SUBJECT:**Mechanical engineering

**DEGREE:**Doctoral

## Record number: 21

**FILENAME:**Boerstler\_fsu\_0071E\_15417.pdf

**TITLE:**The Value of Emotion in the Advance Directive Debate

**AUTHOR:**Boerstler, Kyle R. (Kyle Ryan)

**MEMBER (professor directing dissertation):**Kearns, Stephen, 1979-

**MEMBER (university representative):**Nair-Collins, Michael Patrick

**MEMBER (committee member):**May, Simon Căbulea

**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 (150 pages)

**ABSTRACT:**This dissertation contains emotion. In fact, it is about emotion, and particularly how emotions can disrupt and otherwise force us to reexamine our preconceived notions (or hypothetically predicted values) about important facets of our lives. This dissertation is also about autonomy and the prospect of death, and especially how human emotion changes the conversation surrounding these important topics. I am particularly interested in how the conversation about advance directives only indirectly (or often not at all) addresses emotion, given how emotionally invested most people are in their life (and, when they think about it, the prospect of their demise). I suggest in this dissertation that this is, at least plausibly and perhaps only in part, due to historically patriarchal forces that have caused a kind of cultural blindness surrounding emotion, though this is steadily being rectified by feminists and feminist allies. To return to advance directives, I intend to examine these medical documents from numerous angles. This examination becomes complicated by the cases that I have in mind, which are when advance directives are supposed to provide some measure of control and respect for autonomy for persons who will have dementia or other cognitively declining illnesses. These are popular cases in the literature to look at, but more than that, these are people who are potentially the most vulnerable in these important decisions because a person with dementia is no longer able to advocate for themselves in many cases, even if they have \*advocated\* for their interests previously via an advance directive. I intend to provide arguments that challenge their creation, arguments that challenge their sustained authority over incompetent patients, and arguments that show that other arguments in favor of them fail, perhaps for many reasons, but perhaps more importantly, because of their neglect of emotion. I do not intent to provide a robust theory of what an emotion is, but rather examine how they function in our decision-making and how considerations regarding the kind of knowledge and value they provide can help us recognize important realities that our cold rationality may miss. In the end, I do not argue that advance directives should be done away with entirely. Instead, I argue that the literature holds them in too high a regard in many cases, and even with the best of circumstances in completing them (which is by no means a common occurrence), the emotions provide several routes for argumentation that shows their authority over persons with dementia should be reduced to one tool among many in a complex and fraught decision-making process. Even if my arguments should fail to persuade the reader, I contend that examining such an important dimension of the human experience can only provide valuable insight and wisdom regarding an incredibly difficult issue.

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

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

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

**NOTE (Keywords):**Advance Directive, Bioethics, Dementia, Emotion

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

**NOTE (Advisory Committee):**Stephen Kearns, Professor Directing Dissertation; Michael Patrick Nair-Collins, University Representative; Andrea Carol Westlund, Committee Member; Simon James Peter May, Committee Member.

**SUBJECT:**Ethics

**SUBJECT:**Medical ethics

**SUBJECT:**Philosophy

**DEGREE:**Doctoral

## Record number: 22

**FILENAME:**Boiangin\_fsu\_0071E\_15143.pdf

**TITLE:**Stroboscopic Training Effect on Anticipating the Direction of Tennis Serves

**AUTHOR:**Boiangin, Nataniel Michael

**MEMBER (professor directing dissertation):**Tenenbaum, Gershon

**MEMBER (university representative):**Lewis, Sandra

**MEMBER (committee member):**Chow, Graig Michael

**MEMBER (committee member):**Paek, Insu, (Professor of measurement and statistics)

**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 (78 pages)

**ABSTRACT:**The purpose of the study was to examine the effects of stroboscopic training on intermediate tennis players’ anticipatory response accuracy, response time, and self-efficacy. Participants (N=30) completed six on-court training sessions, where they returned serves for 30 minutes in their respective condition (i.e., stroboscopic medium frequency, stroboscopic low frequency, placebo glasses without a stroboscopic effect). Additionally, participants watched videos of tennis serves occluded just after racket-ball contact and were asked to anticipate the direction of the serve as quickly as possible. Measures collected included anticipatory response accuracy (i.e., number of correct responses), response time, and self-efficacy and were recorded four times throughout the study (i.e., pre, mid, post and 1-week after training). RM ANOVA analyses indicated that there were no significant differences among the groups for anticipatory response accuracy, response time and self-efficacy. Follow-up one-way ANOVAs indicated significant anticipatory accuracy response differences between the low frequency stroboscopic group as compared to the medium frequency and placebo groups. Specifically, subjects in the low frequency group were more accurate in their anticipatory response compared to the other groups. In general, it seems that stroboscopic training has little (or no) effect on anticipatory response of tennis serves. This study is unique because of the ecologically valid methods used in anticipatory training and measurement. Although the current study supports the notion that stroboscopic training does not improve anticipatory responses in tennis serves, additional research is necessary to examine other stroboscopic training methods (e.g., longer sessions for a longer period, different stroboscopic frequencies) and anticipatory response measurements (e.g., on court response to live serves) in tennis and other sports (e.g., baseball)

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Attention, Decision-Making, Sport Psychology, Stroboscopic Training, Tennis

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

**NOTE (Advisory Committee):**Gershon Tenenbaum, Professor Directing Dissertation; Sandra Lewis, University Representative; Graig Chow, Committee Member; Insu Paek, Committee Member.

**SUBJECT:**Educational psychology

**DEGREE:**Doctoral

## Record number: 23

**FILENAME:**Borger\_fsu\_0071E\_15163.pdf

**TITLE:**Photochemistry of Pyridazine N-Oxides: A Versatile Tool for Heterocycle Synthesis

**AUTHOR:**Borger, Maribel

**MEMBER (professor directing dissertation):**Frederich, James H.

**MEMBER (university representative):**Fajer, Piotr G.

**MEMBER (committee member):**Saltiel, Jack

**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 (378 pages)

**ABSTRACT:**Presently, green chemistry is a movement that proactively seeks to create alternative and earth-friendly processes. It is a growing field open for innovation and cost-effective measures to enrich the scientific community while catering to an increasing world population. A technique available to green chemistry is photochemistry. The use of light as a means of chemical change can offer energy saving solutions to chemical reactions performed in organic chemistry. 1,2-diazine N-oxides are bench top stable starting materials rendering them useful building blocks for complex molecules. The photochemistry of pyridazine N-oxides has not been rigorously exploited because of the lack of efficient regioselective access and inability to control competitive reactions. They possess the potential for development of many reaction pathways, including ring-opening and photoreduction. During our investigations of the photochemical ring-opening, we observed an intermediate that is formed after exposure to UV light. To the best of our knowledge, this transient compound has not been isolated or heavily exploited for new reactions. Herein, I will describe our efforts to exploit this (Z)-diazoenone intermediate for applications in heterocycle synthesis using heat and transition metal catalysis The first strategic use of pyridazine N-oxide to nitrogen heterocycles is disclosed. Our synthesis began with readily available 3,6-dichloropyridazine N-oxide and a regioselective Suzuki-Miyaura cross-coupling with PdCl2dppf which selectively couples at C3. Furthermore, aromatic substitution (SNAr) reactions were amenable toward these electron deficient heterocycles to furnish a library of non-symmetric photosubstrates. Upon photolysis with UV light (hv= 350 nm) and elevated temperatures, photochemical ring opening was observed to provide elaborate pyrazole motifs. We varied the electronics of pyridazine N-oxides at C3 with electron withdrawing and electron donating aryl groups. C6 was functionalized with various nucleophiles including nitrogen, oxygen and sulfur. Additionally, we were able to demonstrate this method as a tool in synthesis in our first application to a target molecule. We found reaction conditions to distinguish between competitive ring opening reaction pathways (1) thermal cyclization to afford pyrazole and (2) formation of a π-excessive building block, 2-aminofuran. However, 2-aminofurans are labile and readily oxidize in air, rendering them buildings with obvious limitations. We report a method to synthesize 2-aminofurans using a combination of UV light and rhodium catalysis. These reactive intermediates are used in Diels-Alder cycloaddition reactions with alkenes to give entry to heterocyclic scaffolds found within natural products such as carbazoles and dibenzofurans. Our scope highlighted N-oxides with nucleophilic nitrogen and oxygen as an extension of the library of N-oxides used for pyrazole formation. Moreover, we harnessed the functionality of these scaffolds from synthetically accessible pyridazine N-oxides using our established regioselective approach to non-symmetric N-oxides. We were able to find dienophiles compatible with our system extending the groups incorporated into the carbazole skeletons. In our system, we found limitations and describe our efforts to rationalize our observations. In our quest of finding the synthetic utility of 2-aminofurans in Diels-Alder chemistry, we found 2-aminofurans harboring a nitrogen nucleophile in the ortho position of the aryl ring at C3, as introduceing new reactivity producing 1H-indole-2-acetamide. Indole scaffolds have a wide array of value in organic synthesis. Our strategy is to explore the acid-catalyzed isomerization of 2-aminofuran to functionalized indoles that would be difficult to make. Ring opening of heterocyclic N-oxides can be a powerful tool in organic synthesis. Key to our success was access to pyridazine N-oxides with functionality around the pyridazine nucleus that allowed for control of the competitive pathways.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**May 6, 2019.

**NOTE (Keywords):**methodology, photochemistry, pyridazine, synthesis

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

**NOTE (Advisory Committee):**James H. Frederich, Professor Directing Dissertation; Piotr Fajer, University Representative; Jack Saltiel, Committee Member; Brian Miller, Committee Member.

**SUBJECT:**Chemistry

**SUBJECT:**Chemistry, Organic

**DEGREE:**Doctoral

## Record number: 24

**FILENAME:**Brown\_fsu\_0071E\_15087.pdf

**TITLE:**Teachers' and Speech-Language Pathologists' Perceptions of and Responses to Students' African American English Use within Academic Settings

**AUTHOR:**Brown, Dana Michelle

**MEMBER (professor co-directing dissertation):**Hall-Mills, Shannon S.

**MEMBER (professor co-directing dissertation):**Wood, Carla, (Speech-Language Pathology Professor)

**MEMBER (university representative):**Sunderman, Gretchen L.

**MEMBER (committee member):**Cortese, Juliann

**MEMBER (committee member):**MacRae, Toby

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Communication and Information

**CORPORATE NAME:**School of Communication Science and Disorders

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

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

**ABSTRACT:**The achievement gap between African American students and their Caucasian peers is a problem that has persisted within the educational system since the early 1970s. Researchers have been investigating whether differences in oral language, such as, Nonmainstream American English (NMAE) use contribute to this gap. There is also concern from researchers about teachers’ and speech-language pathologists’ (SLP) perceptions of NMAE use within academic settings, along with the methods that teachers’ and SLPs’ use to respond to linguistic differences. The purpose of this current research was to examine first, third, and fifth-grade teachers’ and elementary school-based SLPs’ perceptions of and responses to the African American English (AAE) dialect based on oral and written language examples. A survey method elicited demographic information, perceptions, and responses to AAE use from participants. Descriptive analyses revealed that the participants had negative perceptions of AAE use. Chi Square and logistic regression analyses revealed that perceptions did not impact the likelihood of the participants responding using the actions provided. Neither professional development nor whether or not the participants reported to use AAE themselves was associated with most of the responses to students’ use of AAE. The results suggest that teachers and SLPs have negative perceptions regarding students AAE use. However, the participants’ perceptions were less likely to influence how they respond to AAE use.

**NOTE (Submitted Note):**A Dissertation submitted to the School of Communication Science and Disorders 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):**African American English, Linguistic Diversity, Perceptions, Responses

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

**NOTE (Advisory Committee):**Shannon Hall-Mills, Professor Co-Directing Dissertation; Carla Wood, Professor Co-Directing Dissertation; Gretchen Sunderman, University Representative; Juliann Cortese, Committee Member; Toby Macrae, Committee Member.

**SUBJECT:**Speech therapy

**DEGREE:**Doctoral

## Record number: 25

**FILENAME:**Brown\_fsu\_0071E\_15327.pdf

**TITLE:**Training for Reentry: Examining the Use of Prison Vocational Programming and Its Effects on Employment and Recidivism

**AUTHOR:**Brown, Jennifer M. (Jennifer Marie)

**MEMBER (professor directing dissertation):**Vitkus, Daniel J.

**MEMBER (university representative):**Radey, Melissa

**MEMBER (committee member):**Bales, William D.

**MEMBER (committee member):**Stewart, Eric Allen

**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 (204 pages)

**ABSTRACT:**The emergence of an unparalleled punitive response to criminal offending in the 1970s fueled a nation-wide prison boom that continued through the first decade of the 21st century (Campbell and Vaughn, 2019; Mears and Cochran, 2015; Travis, Western, and Redburn, 2014; Clear and Frost, 2014). Growing pessimism regarding the rehabilitation of offenders precipitated the shift to policies and practices that emphasized deterrence, incapacitation, and retribution over treatment (Garland, 2001; Simon, 2007; Gottschalk, 2006). This “get-tough” movement had lasting consequences for both the process of prisoner reentry (Travis, 2005; Seiter and Kadela, 2003) and the inmate experience (Kreager and Kruttschnitt, 2018). These sweeping changes may have also had implications for the efficacy of rehabilitative programs that continued to operate despite rhetoric that “nothing worked.” In-prison vocational training, for example, maintained widespread support during this period (Cullen and Travis, 1984) and continues to be one of the most widely available rehabilitative programs (Turner, 2018; Phelps, 2011; Stephan, 2008; Taxman, Perdoni, and Harrison, 2007). The permanence of vocational programs since its implementation during the early 20th century (MacKenzie, 2008) likely derives from its purported practicality for offender reentry. Former prisoners frequently identify employment as one of the most critical needs during the transition process (Western, 2018; Visher and Travis, 2011; Morani, Wikoff, Linhorst, and Bratton, 2011). Programs like vocational training can help this situation by potentially increasing one’s work qualifications and employment prospects. Application of a variety of desistance and criminological theories suggests that these programs may be able to reduce future offending as well through pathways of individual change and employment. Indeed, a large body of prior research finds that vocational training can improve post-prison outcomes (Davis, Bozick, Steele, Saunders, and Miles, 2013; Wilson, Gallagher, and MacKenzie, 2000). Yet, there is little systematic research that evaluates the strengths and limitations of evidence to date, examines the use of vocational training, and rigorously assesses its effects. Accordingly, this dissertation examines four interrelated research questions. First, what is the state of evidence on vocational training? Second, what is vocational training and who gets it? Third, what is the effect of vocational training on post-release employment and recidivism? Fourth, do participant factors condition vocational training effectiveness? This dissertation finds that the current evidence base for vocational training contains a number of research gaps and methodological shortcomings. Using data from the Florida Department of Corrections, the current study highlights that vocational programs involve training for a diverse range of trades but relatively few inmates experience it and of those who do, enrollment is driven by certain characteristics (e.g., age, gender, race). Regression-based estimates of treatment efficacy indicate that attainment of a vocational certificate significantly improves post-prison employment and reduces the rate of recidivism. However, a matching-based approach reveals marginal benefits for employment and decreases in future offending. Finally, this study reveals that the effect of a training certificate on recidivism vary across different prisoner groups. Collectively, these findings suggest several implications for theory, research, and policy.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**June 24, 2019.

**NOTE (Keywords):**Corrections, Prison Programs, Vocational Training

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

**NOTE (Advisory Committee):**Daniel P. Mears, Professor Directing Dissertation; Melissa Radey, University Representative; William D. Bales, Committee Member; Eric A. Stewart, Committee Member.

**SUBJECT:**Criminology

**DEGREE:**Doctoral

## Record number: 26

**FILENAME:**Bruin\_fsu\_0071N\_15348.pdf

**TITLE:**A Comparative Study of Colonoware Ceramics from Two Spanish Mission Sites in Apalachee Province, Leon County, Florida

**AUTHOR:**Bruin, Alison T.

**MEMBER (professor directing thesis):**Peres, Tanya M.

**MEMBER (committee member):**Marrinan, Rochelle A.

**MEMBER (committee member):**Mehta, Jayur M. (Madhusudan)

**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 (131 pages)

**ABSTRACT:**This project examines indigenous made ceramics recovered from two contemporaneous Spanish Mission period sites in Apalachee Province of La Florida. The study focuses on Colonoware, a ceramic type made using non-European manufacturing methods that mimic or are influenced by European ceramic vessel forms. For both samples, sherds possessing qualities that could tie them to forms used in European table service such as cups, brimmed plates and bowls, or pitchers were used as markers of Colonoware. Mission Red Filmed was identified solely based on red pigmentation, and while form and temper were analyzed and recorded those qualities were not the basis for identification for this type. The most substantial issue in ceramic studies is the lack of a concrete and widely applicable classification for this type. The term Colonoware is widely applied to sites of different cultural and temporal contexts. In this study I propose a reformed system of nomenclature that more accurately depicts the context in which these ceramics are found.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Apalachee, Ceramics, Colonoware, La Florida, Spanish

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

**NOTE (Advisory Committee):**Tanya M. Peres, Professor Directing Thesis; Rochelle A. Marrinan, Committee Member; Jayur Mehta, Committee Member.

**SUBJECT:**Archaeology

**DEGREE:**Masters

## Record number: 27

**FILENAME:**Buchman\_fsu\_0071E\_15405.pdf

**TITLE:**Excessive Exercise, Eating Pathology and Suicidality: Investigating the Role of Capability for Suicide

**AUTHOR:**Buchman, Jennifer M. (Jennifer Marie)

**MEMBER (professor directing dissertation):**Joiner, Thomas, Jr.

**MEMBER (university representative):**Winegardner, Mark, 1961-

**MEMBER (committee member):**Cougle, Jesse R. (Jesse Ray), 1975-

**MEMBER (committee member):**Eckel, Lisa A.

**MEMBER (committee member):**Patrick, Christopher J.

**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 (66 pages)

**ABSTRACT:**Eating disorders (EDs) are associated with increased risk for suicide. Recent research suggests that excessive exercise (EE), an ED compensatory behavior, may increase suicide risk via increasing one’s capability for suicide which is comprised of an elevated pain tolerance and a diminished fear of death. However, additional research is needed to determine the exact mechanisms by which EE may influence capability for suicide. Specifically, no studies to date have examined the influence of EE and eating pathology on behavioral indices of capability for suicide. The present study had two aims: 1) this study sought to examine how EE engagement and ED status influences pain avoidance behaviors in comparison to controls; and 2) the second aim of the present study was to determine how EE engagement and ED status influence fear of death and avoidance of death-related stimuli. We recruited 87 participants based on ED and EE status (22 controls, 22 EE only, 21 ED only, and 22 ED+EE). Hierarchical regression with dummy coding was used to compare our groups on the following outcomes: 1) breakpoint and total key presses on a pain avoidance progressive ratio task (CPT); and 2) breakpoint and total key presses on a death avoidance progressive ratio task (viewing and rating of suicide images). The results of the present study provide preliminary, albeit mixed support for our hypotheses. Specifically, we found that the EE only (β = -0.31, p = .017) and ED only (β = -0.30, p = 0.02) groups differed significantly from controls on one measure of pain avoidance (CPT PR breakpoint); the ED only group (β = -0.31, p = .017) differed significantly from controls on one measure of death avoidance (suicide-related images PR total presses). However, our ED group characterized by EE did not differ significantly from controls on any of our behavioral measures. See supplementary file for Tables 1 and 2 which provide group comparisons on main variables of interest (Table 1) and a correlation matrix for continuous variables (Table 2). Exploration of these findings, limitations, and areas for future research are included in our general discussion.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**July 9, 2019.

**NOTE (Keywords):**capability for suicide, eating disorder, excessive exercise, fearlessness about death, pain tolerance, suicide

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

**NOTE (Advisory Committee):**Thomas E. Joiner, Professor Directing Dissertation; Mark Winegardner, University Representative; Jesse R. Cougle, Committee Member; Lisa A. Eckel, Committee Member; Christopher J. Patrick, Committee Member.

**SUBJECT:**Clinical psychology

**DEGREE:**Doctoral

## Record number: 28

**FILENAME:**Butler\_fsu\_0071E\_15351.pdf

**TITLE:**The Impact of Estradiol on Food Intake, Cell Signaling, and Diet-Induced Inflammation

**AUTHOR:**Butler, Michael James, II

**MEMBER (professor directing dissertation):**Eckel, Lisa A.

**MEMBER (university representative):**Overton, J. Michael (James Michael)

**MEMBER (committee member):**Hyson, Richard Lee

**MEMBER (committee member):**Levenson, Cathy W.

**MEMBER (committee member):**Maner, Jon K.

**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 (94 pages)

**ABSTRACT:**There is a well-documented sexual dimorphism in the neural control of food intake and body weight regulation. Estradiol is a leading candidate as a potential biological factor contributing to these sex differences due to its robust anorexigenic effect. However, the cellular and molecular mechanisms driving estradiol’s anorexigenic effect are poorly understood. The goal of this dissertation was to investigate several potential mechanisms underlying estradiol’s effect on energy homeostasis in female rats. Many of estradiol’s behavioral effects are mediated, at least partially, via extra-nuclear estradiol signaling. Here, we investigated whether two estrogen receptor (ER) agonists, targeting ERα and G protein-coupled ER-1 (GPER-1), could promote rapid anorexigenic effects in ovariectomized (OVX) rats. Our findings demonstrated that selective activation of ERα produces a rapid (within 1 h) decrease in food intake that is best explained by a non-genomic signaling pathway and thus implicates the involvement of extra-nuclear ERα. We also found that activation of GPER-1 is both sufficient to suppress feeding and necessary for ERa agonist, PPT’s, rapid anorexigenic effect. Next, we investigated estradiol’s impact on the Janus kinase – signal transducer and activator of transcription (JAK-STAT) pathway in the hypothalamus of OVX rats and in cultured proopiomelanocortin (POMC) neurons. The JAK-STAT pathway mediates leptin’s anorexigenic effect and previous work has shown that estradiol also activates this pathway in male mice. However, the specific estrogen receptor subtype and neuronal phenotype has not been investigated in the rat. Here, we show that activation of ERa in OVX rats increases the expression of phosphorylated STAT3 in the hypothalamic arcuate nucleus (ARC) and activation of both ERa and GPER-1 increases the nuclear translocation of phosphorylated STAT3 in cultured POMC neurons. In addition to investigating the effects of estradiol under normal, chow-fed, conditions, we wanted to investigate the effects of estradiol in animals consuming a palatable high fat diet (HFD). Previous work has shown consumption of a HFD increases inflammation in the hypothalamus in male mice and rats, but little to no work has been conducted in females. Here, we showed for the first time that acute HFD exposure increases microgliosis, as measured by an increase in the number of cells expressing the microglia-specific protein Iba1, and decreased microglial branching and complexity in the hypothalamus and nucleus of the solitary tract (NTS) of OVX rats. These data suggest that HFD increased microglial accumulation and activation in the hypothalamus and hindbrain. Estradiol replacement blocked the HFD-induced increase in microglia in the hypothalamus and hindbrain and reduced microglia activation in the hypothalamus. These data provide the first in vivo evidence that estradiol may play a protective role in diet-induced inflammation in female rats. In addition to increasing microglial activity, consumption of a HFD has been shown to negatively impact neuronal health in the hypothalamus. In vitro studies have shown that treatment of hypothalamic neurons with palmitate, a common dietary saturated fat, increases markers of both inflammation and endoplasmic reticulum stress. In our study, we showed that treating cultured POMC neurons with palmitate increased mRNA expression of interleukin-6 (IL-6), nuclear factor kappa-light-chain-enhancer of activated B cells (NF-κB), and CCAAT-enhancer-binding protein homologous protein (CHOP). Pre-treatment with estradiol attenuated the palmitate-induced increase in IL-6 and treatment with the selective GPER-1 agonist, G-1, attenuated increases in IL-6 and NF-kB mRNA caused by palmitate. These data suggest that estradiol attenuates markers of inflammation caused by saturated fat, but has no effect on a marker of endoplasmic reticulum stress. Taken together, these studies demonstrate that estradiol affects energy homeostasis via activation of extra-nuclear receptors, JAK-STAT activity, and decreasing the neuroimmune response to diet.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**estrogen, feeding, high fat diet, hypothalamus, neuroinflammation, STAT3

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

**NOTE (Advisory Committee):**Lisa Eckel, Professor Directing Dissertation; James Mike Overton, University Representative; Rick Hyson, Committee Member; Cathy Levenson, Committee Member; Jon Maner, Committee Member.

**SUBJECT:**Neurosciences

**SUBJECT:**Biology

**SUBJECT:**Endocrinology

**DEGREE:**Doctoral

## Record number: 29

**FILENAME:**Butler\_fsu\_0071E\_15361.pdf

**TITLE:**Modern Day Racism: Examining the Relationship between Minority Threat and the Racial and Ethnic Typification of Crime

**AUTHOR:**Butler, Leah Fikre

**MEMBER (professor directing dissertation):**Gertz, Marc G.

**MEMBER (university representative):**Kavka, Martin

**MEMBER (committee member):**Stewart, Eric Allen

**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 (100 pages)

**ABSTRACT:**To be added

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Modern Racism, Racial Threat, Racial Typification

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

**NOTE (Advisory Committee):**Marc G. Gertz, Professor Directing Dissertation; Martin Kavka, University Representative; Eric Stewart, Committee Member; William Bales, Committee Member.

**SUBJECT:**Criminology

**DEGREE:**Doctoral

## Record number: 30

**FILENAME:**Camoglu\_fsu\_0071E\_15330.pdf

**TITLE:**How to Make Love to an Apple

**AUTHOR:**Camoglu, Etkin

**MEMBER (professor directing dissertation):**Butler, Robert Olen

**MEMBER (university representative):**Corrigan, John, 1952-

**MEMBER (committee member):**Stuckey-French, Elizabeth

**MEMBER (committee member):**Horack, Skip

**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 (153 pages)

**ABSTRACT:**The central characters of How To Make Love To An Apple are a mother and daughter. The first part of the book takes place in the girl's memory of her childhood in Arizona at the house where she grew up with her mother and father. The girl is the central protagonist. She is Turkish-American, born and raised in Arizona. The girl's mother and father moved to the United States before the girl was born. There is no explicit explanation provided in the book as to why they chose to settle in Arizona. But one comes to understand through the sections of the girl's childhood memories, that the father was older and had made enough money to retire and build a small estate. The father commits suicide when the girl is a teenager at which point she is sent to boarding school in New York. Central conflict presents itself in the form of a third major character: The American. The girl and her mother meet him while on vacation in Turkey, a trip meant to celebrate the girl’s high school graduation. When The American materializes, he imposes his presence upon the mother and in consequence, the girl. At first, she is resentful of this, of his interruption, of his loud voice, of his showy clothes, of the giddy ways of her mother around him. But The American is also a way for the girl to discover the force of her own sexuality, of her own seduction.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**May 21, 2019.

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

**NOTE (Advisory Committee):**Robert Olen Butler, Professor Directing Dissertation; John Corrigan, University Representative; Elizabeth Stuckey-French, Committee Member; Bruch Horack, Committee Member.

**DEGREE:**Doctoral

## Record number: 31

**FILENAME:**Campbell\_fsu\_0071E\_15297.pdf

**TITLE:**Racial Identity and Mindfulness as Predictors of Post-Traumatic Growth in Black Adults Experiencing Race-Based Trauma

**AUTHOR:**Campbell, Amanda L.

**MEMBER (professor directing dissertation):**Dong, Shengli

**MEMBER (university representative):**Abell, Neil

**MEMBER (committee member):**Ebener, Deborah J.

**MEMBER (committee member):**Becker, Martin Swanbrow

**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 (148 pages)

**ABSTRACT:**Recent advancements in multicultural psychology show that racial minorities experience trauma symptoms as a result of stress-inducing racial-based events (Carter, 2007). In response, Evans et al. (2015) proposed using a post-traumatic growth (PTG) framework to help individuals with race-based trauma (RBT) to enhance their sense of autonomy, connection, and life purpose (Joseph et al., 2012b). However, no research to date has empirically examined the relationship between these variables. The current study examined the amount of variance of PTG explained by racial identity attitudes and mindfulness facets in Black Americans who meet criteria for RBT. The identified independent variables of mindfulness and racial attitudes were selected as they have been shown to impact the appraisal process directly (Hanley et al., 2015) and indirectly (Franklin-Jackson & Carter, 2007), respectively. The sample consisted of 134 self-identified Black adults (≥18) who met criteria for RBT, as measured by the Race-Based Trauma Stress Symptom Scale (Carter, 2007). PTG, racial identity attitudes, and mindfulness facets were measured using the Psychological Well-Being Post-Traumatic Changes Questionnaire (Joseph et al., 2012), the Cross Racial Identity Scale (Cross & Vandiver, 2001), and the Five-Facet Mindfulness Questionnaire (Baer et al., 2008). Results of a hierarchical multiple regression showed that the complete model accounted for 35% of PTG, where Self-Hatred attitudes (β = -.29), Anti-White attitudes (β = -.32), and Act with Awareness (β = .22) emerged as significant predictors. This exploratory study provides partial support for the relationship between racial identity attitudes, multicultural facets, and PTG in the context of Black Americans experiencing RBT. The current study provides a foundation for future research treating race-based injuries and promoting PTG in the Black population.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**June 6, 2019.

**NOTE (Keywords):**Black studies, discrimination, mindfulness, post-traumatic growth, race-based trauma

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

**NOTE (Advisory Committee):**Shengli Dong, Professor Directing Dissertation; Joseph Neil Abell, University Representative; Deborah Ebener, Committee Member; Martin Swanbrow Becker, Committee Member.

**SUBJECT:**African Americans--Study and teaching

**SUBJECT:**Clinical psychology

**SUBJECT:**Social psychology

**DEGREE:**Doctoral

## Record number: 32

**FILENAME:**Chamberlin\_fsu\_0071N\_15344.pdf

**TITLE:**Systemic Sexism Perception and Antisexist Motivation Predict Men and Women's Collective Action Orientation

**AUTHOR:**Chamberlin, Kristina Grace

**MEMBER (professor directing thesis):**Plant, Ashby

**MEMBER (committee member):**Meltzer, Andrea L.

**MEMBER (committee member):**Kelley, 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 (63 pages)

**ABSTRACT:**Current events would suggest that activism against gender inequality is on the rise in the United States. However, more action is needed if gender equality is to be achieved. To better understand these events and to encourage greater participation, two studies explore potential underlying mechanisms that explain men and women’s intentions to participate in social movements for women’s rights (antisexist collective action intent). Using bystander intervention theory (Latane & Darley, 1969) as a guide, we theorized that people who identify inequalities in their environments as systemic sexism (systemic sexism perception) are more likely to be driven by prescriptive moral convictions that one must proactively advocate for women’s rights (antisexist motivation). This motivation is predicted to consequently increase both men and women’s antisexist collective action intent. Cross-sectional data demonstrated that systemic sexism perception predicted antisexist motivation, and both variables predicted antisexist collective action intent, for both men and women (over and above other predictors). An experiment demonstrated that participants who were exposed to a video outlining the effects of systemic sexism on the STEM gender gap (vs. a control) were more likely to believe systemic sexism contributes to this gap, thereby experiencing greater antisexist motivation and collective action intent. The implications of these findings are discussed and future lines of research are proposed.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**collective action, gender, inequality, motivation, sexism, social justice

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

**NOTE (Advisory Committee):**E. Ashby Plant, Professor Directing Thesis; Andrea Meltzer, Committee Member; Colleen Kelley, Committee Member.

**SUBJECT:**Social psychology

**DEGREE:**Masters

## Record number: 33

**FILENAME:**Chen\_fsu\_0071E\_15301.pdf

**TITLE:**Exploring Teacher and Child Factors That Explain Teacher-Perceived Relationship Qualities with Children Living in Poverty: A Multilevel Approach

**AUTHOR:**Chen, Shiyi

**MEMBER (professor directing dissertation):**Phillips, Beth M.

**MEMBER (university representative):**Rutledge, Stacey A.

**MEMBER (committee member):**Roehrig, Alysia D., 1975-

**MEMBER (committee member):**Turner, Jeannine E.

**MEMBER (committee member):**Zhang, Qian

**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 (134 pages)

**ABSTRACT:**Research has shown that the quality of preschool teacher-child relationships can forecast children’s social-emotional development, academic achievement, and school attitude; these benefits are amplified for impoverished children. However, teachers tend to have conflictual relationships with children living in poverty. Additionally, research in this area mostly focuses on either teacher or child factors. Therefore, driven by the educational dilemma and research gap, I investigated contributions of both teacher and child factors to teacher-child relationships in preschools serving children living in poverty (i.e., attending Head Start). Stemming from a preliminary study, this study examined the relations of child gender, problem behavior, teacher-child racial/ethnic match, and teacher education and job stress to teacher-reported teacher-child relationships. Based on the estimations of a priori power analyses, 129 teachers and 635 children from collaborating Head Start agencies across the U.S. were recruited in this study. Teachers completed a set of well-validated self- and child-focused questionnaires through an online survey system. Considering the nested nature of data (children clustered within classes), a multilevel modeling approach was employed for data analysis. Several main findings emerged: First, boys tended to have more conflictual relationships and girls tended to have closer relationships with teachers, which could be partially explained by their different levels of problem behaviors. Second, teacher-child racial/ethnic match did not play a role in the quality of teacher-child relationships. Third, having a degree (AA, BA, and MA), as compared to having a certificate (i.e., CDA) was associated with a closer and less conflictual teacher-child relationship. Fourth, less job control perceived by teachers were associated with more teacher-child conflict. Implications were discussed in this study.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**July 9, 2019.

**NOTE (Keywords):**At-risk children, Problem behavior, Teacher-child relationships, Teacher education, Teacher job stress

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

**NOTE (Advisory Committee):**Beth Phillips, Professor Directing Dissertation; Stacey Rutledge, University Representative; Alysia Roehrig, Committee Member; Jeannine Turner, Committee Member; Qian Zhang, Committee Member.

**SUBJECT:**Educational psychology

**SUBJECT:**Early childhood education

**SUBJECT:**Teachers--Training of

**DEGREE:**Doctoral

## Record number: 34

**FILENAME:**Chen\_fsu\_0071E\_15311.pdf

**TITLE:**A Structural Equation Modeling Analysis of Chinese Undergraduate English Language-Learners' Personal Factors and Contextual Factors Based on Self-Determination Theory

**AUTHOR:**Chen, Yanyan

**MEMBER (professor directing dissertation):**Turner, Jeannine E.

**MEMBER (university representative):**Sunderman, Gretchen L.

**MEMBER (committee member):**Yang, Yanyun

**MEMBER (committee member):**Roehrig, Alysia D., 1975-

**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 (147 pages)

**ABSTRACT:**This study investigated the relationships among Chinese undergraduate English learners’ motivation for learning English (i.e., students’ internal choice, students’ external pressure), integrative orientation (i.e., students’ engagement with the target language culture or community), students’ perceptions of psychological need satisfaction, English self-efficacy, classroom engagement, and their English academic achievement. The theoretical framework underlying this study is Self-Determination Theory (Ryan & Deci, 2000a, 2000b, 2017). To investigate the relationships among the variables, a quantitative research methodology of a full structural equation model with single indicators was used. Although language learners’ motivation for learning a second/foreign language is a well-studied construct, there is a paucity of studies to investigate whether or not Self-Determination Theory applies to Chinese collectivistic culture for understanding Chinese college English language learners’ motivation for learning English. The purpose of this dissertation study was to investigate the relationships among Chinese undergraduate English language learners’ personal variables (i.e., motivation for learning English, integrative orientation, English self-efficacy, classroom engagement, and English academic achievement) and contextual variables (i.e., students’ perceptions of psychological need satisfaction) in a full structural model. The participants of this study were 1,378 Chinese undergraduate English majors from middle-level national public universities in the Southeast of China. Findings of the current study showed that Chinese undergraduate English language-learners, who were primarily regulated by internal choice (i.e., intrinsic regulation, identified regulation), were likely to perceive that teachers met their psychological-needs for intrinsic motivation, and to have greater intentions to engage in the target-language culture and community, which in turn predicted their learning-related beliefs (e.g., a high sense of English efficacy), learning-related behaviors (e.g., active involvement in learning activities), and English achievement. Nevertheless, students who were primarily regulated by externally-controlled reasons for learning English, including introjected regulation (i.e., performing a task to avoid feeling guilty), external regulation (i.e., performing a task for obtaining rewards), and parental persuasion (i.e., parents’ influence toward learning English) were also likely to perceive that their teachers met their psychological-needs, which may have influenced their intention to integrate into the target-language culture and community. This dissertation study investigated Chinese undergraduate English learners’ motivation for learning English as a foreign language and the consequent learning outcomes. Findings of this study broadened understandings of students’ motivation for learning a language by showing how students’ initial reasons for learning a language may influence their learning beliefs, classroom engagement, and language achievement. Keywords: Chinese undergraduate English majors, motivation, psychological need satisfaction, integrative orientation, self-determination theory

**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):**April 12, 2019.

**NOTE (Keywords):**Chinese undergraduate English majors, Classroom engagement, Integrative orientation, Motivation, Psychological need satisfaction, Self-determination theory

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

**NOTE (Advisory Committee):**Jeannine E. Turner, Professor Directing Dissertation; Gretchen Sunderman, University Representative; Yanyun Yang, Committee Member; Alysia Roehrig, Committee Member.

**SUBJECT:**Educational psychology

**DEGREE:**Doctoral

## Record number: 35

**FILENAME:**Chen\_fsu\_0071E\_15394.pdf

**TITLE:**De Haas-Van Alphen Measurements in Topological Metals and Semimetals

**AUTHOR:**Chen, Kuan-Wen

**MEMBER (professor co-directing dissertation):**Baumbach, Ryan E.

**MEMBER (professor co-directing dissertation):**Balicas, Luis

**MEMBER (professor co-directing dissertation):**Greene, Laura H.

**MEMBER (university representative):**Shatruk, Mykhailo

**MEMBER (committee member):**Manousakis, Efstratios

**MEMBER (committee member):**Graf, David E. (David Earl)

**MEMBER (committee member):**Collins, David C. (David Christopher)

**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 (101 pages)

**ABSTRACT:**This thesis studied the electronic structure at the Fermi level and the topological character of topological semimetals via torque magnetometry. Torque magnetometry measures the anisotropic magnetization of the sample in a tilted magnetic field. In our measurements, the magnetic field is up to 35 T and the temperature is down to 300 mK. The oscillatory signal of the magnetization is detected, which is the so called “de Hass van Alphen (dHvA)” effect. By using dHvA effect, many important parameters such as the geometry of Fermi surfaces, effective masses, quantum mobilities, Land ́e g factors and Berry’s phases. It is especially important for the Berry’s phase extraction. It is known that if there is a cyclotron orbit encircling a Dirac node, a non-trivial Berry’s phase π can be extracted and a trivial Berry’s phase 0 is expected for a conventional parabolic band. In the study of MAl3, we provided a detailed study of the dHvA oscillations and provided a comparison with the calculated band structures. The angular dependence of their Fermi surface cross-sectional areas reveals a remarkably good agreement with our first-principles calculations. dHvA supports the existence of tilted Dirac cones with Dirac type-II nodes located at 100, 230 and 250 meV above the Fermi level EF for VAl3,NbAl3 and TaAl3 respectively, in agreement with the prediction of broken Lorentz invariance in these compounds. However, for all three compounds we find that the cyclotron orbits on their FSs, including an orbit nearly enclosing the Dirac type-II node, yield trivial Berry phases. We showed that if one would like to derive a convincing Berry’s phase from quantum oscillations one has to take into account the spin dephasing term in the LK formalism, and the precise location between the cyclotron orbit and the Dirac node. M2Te2X is studied via both torque magnetometry and angle-resolved photoemission spectroscopy (ARPES). Bulk two-dimensional Fermi surfaces are well-described by the dHvA oscillations and first principles calculations. Intriguingly, slab electronic structure calculations predict Dirac-like surface states at different locations within the Brillouin zone, which is consistent with ARPES observations.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**de Haas-van Alphen, Dirac, quantum oscillations, topological, torque, Weyl

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

**NOTE (Advisory Committee):**Ryan E. Baumbach, Professor Co-Directing Dissertation; Luis Balicas, Professor Co-Directing Dissertation; Laura H. Greene, Professor Co-Directing Dissertation; Michael Shatruk, University Representative; Efstratios Manousakis, Committee Member; David E. Graf, Committee Member; David C. Collins, Committee Member.

**SUBJECT:**Condensed matter

**DEGREE:**Doctoral

## Record number: 36

**FILENAME:**Chiu\_fsu\_0071E\_15397.pdf

**TITLE:**The Impacts of Health Care Capital Controls on Health Outcomes and Regional Competition

**AUTHOR:**Chiu, Kevin

**MEMBER (professor directing dissertation):**Kantor, Shawn Everett

**MEMBER (university representative):**Lee, Keon-Hyung

**MEMBER (committee member):**Kitchens, Carl T.

**MEMBER (committee member):**Rodgers, Luke P.

**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:**Capital control policies, such as certificate of need (CON) regulations, are often touted as a means of combatting the rising costs of healthcare. However, such policies often have little to no concern with their impact on health outcomes. This dissertation examines this impact. The first chapter, “The Impact of Certificate of Need Laws on Heart Attack Mortality,” explores the relationship between heart attack deaths and CON laws, assessing the differential impact on states adopting CON regulation between 1968 and 1982. Using neighboring counties on opposite sides of a state border to account for the endogeneity of healthcare preferences across regions, I find that the introduction of CON regulations led to 6-7 additional heart attack deaths per 100,000 (which represents a 4.2% increase in deaths relative to the pre-CON mean). The goal of the next two chapters is to explain possible mechanisms that links CON policies to the additional deaths. The second chapter, “Health Returns to Hospital-Level Capital Investments: Evidence from Endowment Shocks,” measures the effect of capital on health outcomes. Taking advantage of the fact that non-profit hospitals follow a rigid endowment spending policy based upon the market value of their endowments, my coauthor (Shawn Kantor) and I develop an instrumental variable for current capital spending that is based upon each non-profit hospital's endowment level interacted with stock market shocks over time. Using patient-level discharge data from non-profit hospitals in the state of Florida from 2006 to 2014, we find that for every $1,000,000 increase in a hospital's capital expenditure, mortality decreases by 0.0062 to 0.0123 percentage point for the average ER visitor, and 0.0064 to 0.0110 percentage point for the average patient admitted to the hospital. This equates to about 6.2 to 12.3 individuals per 100,000. This effect, however, is economically small, since the average hospital treats 1,357 patients per year. Finally, the third chapter, “Using Certificate of Need Regulations to Deter Entry into the Healthcare Market: Case Study of Florida Prior to Repeal,” is a case study of Florida's CON regulations prior to repeal in 2019. The goal is to provide a description of the CON approval process for future research on the impact of CON. This chapter explores the traditional methods of entry deterrence in the healthcare market then discusses how the regulatory environment may provide an additional option for incumbents to use unproductive capital to deter entry into a CON regulatory environment. I then provide an exploratory analysis of whether an incumbent has an impact on CON approval, conditional on the entrant reaching the decision to file a CON application, and briefly describe what needs to be accounted for in any future analysis.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**June 28, 2019.

**NOTE (Keywords):**Acute Myocardial Infarction, Capital Control, Certificate of Need, CON, Health Outcomes, Health Policy

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

**NOTE (Advisory Committee):**Shawn Kantor, Professor Directing Dissertation; Keon-Hyung Lee, University Representative; Carl Kitchens, Committee Member; Luke Rodgers, Committee Member.

**SUBJECT:**Economics

**SUBJECT:**Public health

**SUBJECT:**Public policy

**DEGREE:**Doctoral

## Record number: 37

**FILENAME:**Choi\_fsu\_0071E\_15383.pdf

**TITLE:**An Investigation of Social Enterprise: Uncovering Its Potential for Co-Production, Relationship with Government, and Employees' Organizational Commitment

**AUTHOR:**Choi, Donwe

**MEMBER (professor directing dissertation):**Berry, Frances Stokes

**MEMBER (university representative):**Weissert, Carol S.

**MEMBER (committee member):**Lee, Keon-Hyung

**MEMBER (committee member):**Feiock, Richard C.

**MEMBER (committee member):**Brower, Ralph S.

**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 (138 pages)

**ABSTRACT:**This dissertation aims to enhance our understanding of social enterprise, particularly from the perspective of public policy and management. More specifically, the three papers within this dissertation attempt to make three significant contributions to the existing literature on this topic. The first paper explores the potential of social enterprise as a platform for co-production through illustrations from international practice. Combining social enterprise research and co-production literature, it presents a conceptual framework of the relationship between social enterprise and co-production. The findings also help public administrators to better understand the advantages of social enterprise for co-production. The second paper examines the impact of government funding on public value creation. Linking public policy and organizational performance, this paper contributes to a better understanding of the relationship between government and social enterprise. The findings also provide policymakers with practical guidance on how to promote social enterprise so that it can create more social outcomes. The third paper investigates the impact of social enterprise’s social orientation on the organizational commitment of individuals working for social enterprises from the perspective of public management. This paper contributes both to social enterprise research and organizational commitment literature by uncovering what promotes the organizational commitment of individuals working for social enterprises. In addition, through unpacking the difference between millennials and earlier generations in regard to organizational commitment, this paper provides social entrepreneurs and social enterprise managers with practical guidance on how to manage their employees, especially millennials.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**co-production, millennials, organizational commitment, public value creation, social enterprise, social enterprise policy

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

**NOTE (Advisory Committee):**Frances S. Berry, Professor Directing Dissertation; Carol S. Weissert, University Representative; Keon-Hyung Lee, Committee Member; Richard Feiock, Committee Member; Ralph Brower, Committee Member.

**SUBJECT:**Public administration

**DEGREE:**Doctoral

## Record number: 38

**FILENAME:**Chong\_fsu\_0071N\_15433.pdf

**TITLE:**Threat-Related Attentional Bias, Cognitive Control, and Temperament in Young Children

**AUTHOR:**Chong, Lyndsey Juliane

**MEMBER (professor directing thesis):**Meyer, Alexandria

**MEMBER (committee member):**Proudfit, Greg Hajcak

**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 (57 pages)

**ABSTRACT:**Anxiety disorders occur early in development and are one of the most common forms of psychopathology in children. Moreover, anxiety is associated with persistent impairment across the lifespan; therefore, investigating mechanisms that underlie anxiety in early childhood is crucial for prevention and intervention efforts. A fearful temperament in childhood has been shown to predict anxiety across development. Decreased cognitive control and threat-related attentional biases have also been linked to the development of anxiety, but little to no work has examined how temperament (i.e., fearfulness) and cognitive control may simultaneously predict threat-related attentional bias. Additionally, previous work on attentional bias has used less reliable reaction time (RT) based measures of attention. In the present study, we 1) investigated the psychometric properties of an eye-tracking measure of attentional bias, 2) tested if fearfulness and cognitive control were related to attentional biases to threat, and 3) examined if these relationships had unique or overlapping effects. Results showed good psychometric properties, comparable to that found in adult eye-tracking studies. However, contrary to our hypothesis, fearfulness and cognitive control did not significantly predict threat/neutral dwell time and attentional biases. Future studies may explore if cognitive control and fearfulness prospectively predict threat attentional bias and the onset of anxiety using a longitudinal design.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**attentional bias, cognitive control, development, eye-tracking, fearfulness, temperament

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

**NOTE (Advisory Committee):**Alexandria Meyer, Professor Directing Thesis; Greg Hajcak, Committee Member; Colleen Marie Ganley, Committee Member.

**SUBJECT:**Psychology

**DEGREE:**Masters

## Record number: 39

**FILENAME:**Claxton\_fsu\_0071E\_15251.pdf

**TITLE:**Feminine Body Ideals in Teen Girl and Women Fashion Magazines and Instagram

**AUTHOR:**Claxton, Elyse Taylor

**MEMBER (professor directing dissertation):**Rohlinger, Deana A.

**MEMBER (university representative):**Dennen, Vanessa P., 1970-

**MEMBER (committee member):**Burdette, Amy M.

**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, 2019

**PHYSICAL DESCRIPTION:**1 online resource (217 pages)

**ABSTRACT:**Media are important agents of socialization. Accordingly, media images reflect as well as inform what characteristics symbolize feminine beauty. In the field of female beauty and fashion magazines in the U.S., visual portrayals of women with characteristics such as a thin body shape, Caucasian skin color, blue eye color, and blonde hair color are so frequent that these characteristics are viewed as symbols of ideal feminine beauty. However, recent changes in the fashion magazine field indicate a potential for newer, more diverse representations. Body positivity advocates utilize Internet Communication Technologies (ICTs) to organize and engage in body politics as they petition magazines to take ‘body oaths,’ a promise to incorporate more inclusive portrayals of feminine beauty. This research utilizes field theory to explore magazine readers and activist groups use of social media to engage, praise, and critique the fashion magazine field in an effort to change the field and its content. A quantitative content analysis is used to compare the body portrayals found in the pictorial content of four different teen girls’ and women’s print magazines and their Instagram accounts (Glamour, Cosmopolitan, Seventeen, and Teen Vogue during the summer and fall editions/months of 2016 and 2017) and a qualitative analysis looks at user engagement on the magazines’ Instagram accounts. This data addresses the question: Are the changes in the female fashion magazine field enough to challenge field practices that subjugate female beauty to narrow definitions where thin bodies are constructed as the embodiment of ideal femininity? Considering body ideals as social constructions, meaning they are created, maintained, and also re-created, by a particular society and particular fields embedded within a society. This research considers how factors inside and outside the magazine field act upon the magazine outlet’s constructed ideals of femininity specifically as it relates to bodies. The current research provides three key contributions to the field. First, the study asks whether sociological understanding of contemporary pictorial representations of bodies in popular media is changing within the field of female fashion magazines. Secondly, the research furthers understanding of the interactions between movement activists and readers and technological changes in light of the dynamics of the media field. Finally, the study helps us more thoroughly understand the way body ideals are constructed and reconstructed. The research addresses the following topics: gender, social movements and media

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**gender, internet communication technologies, media, social movements, women's studies

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

**NOTE (Advisory Committee):**Deana A. Rohlinger, Professor Directing Dissertation; Vanessa Dennen, University Representative; Amy Burdette, Committee Member; Miranda Waggoner, Committee Member.

**SUBJECT:**Sociology

**SUBJECT:**Mass media

**SUBJECT:**Women's studies

**DEGREE:**Doctoral

## Record number: 40

**FILENAME:**Collins\_fsu\_0071E\_15356.pdf

**TITLE:**Bridging the Medical Pipeline: An Examination of a Medical Pipeline Program to Assess Student Perceptions and Benefits

**AUTHOR:**Collins, Rhonda

**MEMBER (professor directing dissertation):**Park, Toby J.

**MEMBER (university representative):**Glueckauf, Robert L.

**MEMBER (committee member):**Jones, Tamara Bertrand

**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 (101 pages)

**ABSTRACT:**Healthcare professions are faced with a problem, a shortage of underrepresented minorities (URM) who resemble the racial, ethnic, and gender structure of the community that they will one day serve. Further impacting this problem is the fact that fewer URMs are entering medical schools. Pipeline programs have been identified as one possible solution to increasing URM matriculation into medicals schools. This study aimed to determine the effectiveness of one medical pipeline program, the Florida State University College of Medicine’s Bridge to Clinical Medicine Program, in attaining student goals. Building on existing research about pipeline programs, the research asked about the pre-medical school characteristics of Bridge Program students, their academic outcomes, and perceptions about the program. Based on a review of pipeline program literature, an online survey was developed and distributed to all former Bridge Program students, approximately 150 students. Student academic data was obtained to include all 18 years of the Bridge Program to compare student performance. An analysis of the data and survey responses indicated the Bridge Program is meeting the student focused short and intermediate goals. Long-term goals were not addressed due to the small number of Bridge students that have graduated the program, medical school, and completed residency programs. Data and survey responses provided a better understanding of how Bridge students compared to other students admitted directly into the medical school program. Survey responses offered former Bridge student perceptions about their experiences and impact of the program. Based on the findings, the main recommendations include enhancement of existing mentoring and research activities, more high-stakes examination preparations, moving to a pass/fail grading system, as well as making the Bridge Program more visible through publicity, recognition, and additional research. Overall, the Bridge Program has met the student focused goals and could benefit from enhancements to current activities and continued research.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**June 9, 2019.

**NOTE (Keywords):**medical pipeline, Program evaluation

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

**NOTE (Advisory Committee):**Toby J. Park, Professor Directing Dissertation; Robert Glueckauf, University Representative; Tamara Bertrand Jones, Committee Member; Robert Schwartz, Committee Member.

**SUBJECT:**Educational evaluation

**DEGREE:**Doctoral

## Record number: 41

**FILENAME:**Corbett\_fsu\_0071E\_15389.pdf

**TITLE:**Simulation Studies of Oxidized Human Thioredoxin Ionization

**AUTHOR:**Corbett, Karen M. (Karen Marie)

**MEMBER (professor directing dissertation):**Yang, Wei

**MEMBER (university representative):**Schlenoff, Joseph B.

**MEMBER (committee member):**Hoekman, Timothy

**MEMBER (committee member):**Stroupe, M. Elizabeth (Margaret Elizabeth)

**MEMBER (committee member):**Silvers, Robert

**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 (260 pages)

**ABSTRACT:**Protein residue ionization often plays a vital role in protein function, such as enzyme catalysis and pH-dependent structural changes. Inadequate conformational and protonation state sampling in molecular dynamics (MD) simulations has limited the accuracy of predictions of residue pKa values and structural change concomitant to residue ionization state change. As part of an ongoing effort in the Yang lab to address this conformational sampling issue, we developed a novel enhanced sampling MD simulation method, called adaptive dynamic reporting (ADR). In this thesis, we show that the ADR method has excellent accuracy, precision, and convergence time for a wide range of simulation parameter sets and order parameters, compared to previously established methods. Next, using ADR-based high-order orthogonal space tempering (OST) methods, we studied a number of ionization-dependent properties for all human oxidized C62A/C69A/C73A thioredoxin ionizable residues. To carry our this study, we developed a novel alchemical OST pKa titration scheme: 1) to sample the relevant protonation microstates of thioredoxin, and 2) to calculate the microscopic pKa values, protonation microstate populations, titration curves, and apparent pKa for all human oxidized C62A/C69A/C73A thioredoxin ionizable residues. The OST pKa simulations accurately predict the apparent pKa values for each of these residues. Moreover, from our OST pKa simulations we identified novel thioredoxin conformations and dynamics corresponding to biologically essential ionization states. These long-timescale, ionization-coupled motions observed were in good agreement with NMR spectroscopy observations of homologous thioredoxin. In addition, we were able to utilize the observed the ionization-coupled dynamics of human oxidized C62A/C69A/C73A thioredoxin to identify possible sources of the pKa shifts for several titratable residues. We then studied ionization coupling between residues using their deprotonation free energies. Several interacting residues showed nonlinear deprotonation free energies over various pH ranges. In summary, there are four main contributions in this dissertation. First, we developed and analyzed a novel, rigorous, and widely-applicable enhanced sampling method, ADR. Second, we developed a novel titration scheme, and in combination with OST pKa simulations, calculated and analyzed all of the residue microscopic pKa values in human oxidized C62A/C69A/C73A thioredoxin. Third, we established how the hierarchical dynamics of thioredoxin are constructed to respond to external pH perturbations by characterizing novel protonation-dependent dynamics of thioredoxin. Finally, we extensively studied inter-residue ionization cooperativity in thioredoxin by calculating residue deprotonation free energies and by analyzing the dynamics of thioredoxin coupled to the ionization of these residues.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Enhanced Sampling, Ionization, pKa, Protonation, Thioredoxin

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

**NOTE (Advisory Committee):**Wei Yang, Professor Directing Dissertation; Joseph B. Schlenoﬀ, University Representative; Timothy Cross, Committee Member; M. Elizabeth Stroupe, Committee Member; Robert Silvers, Committee Member.

**SUBJECT:**Biophysics

**SUBJECT:**Chemistry, Physical and theoretical

**DEGREE:**Doctoral

## Record number: 42

**FILENAME:**Cox\_fsu\_0071E\_15264.pdf

**TITLE:**The Development of Mathematical Practices through Word Problem Solving Instruction for Students with Autism Spectrum Disorder

**AUTHOR:**Cox, Sarah K. (Sarah Kirsten)

**MEMBER (professor co-directing dissertation):**Root, Jenny Rose

**MEMBER (professor co-directing dissertation):**Whalon, Kelly J.

**MEMBER (university representative):**Ke, Fengfeng

**MEMBER (committee member):**Jakubowski, Elizabeth M.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Education

**CORPORATE NAME:**Department of Special Education

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

**PHYSICAL DESCRIPTION:**1 online resource (175 pages)

**ABSTRACT:**This study investigated the effects of a problem solving instructional strategy known as Modified Schema Based Instruction (MSBI) on the Mathematical Practices of four students with autism spectrum disorder (ASD). The Common Core State Standards for Mathematics highlight the importance of not only content standards for mathematics, but also mathematical practices such as communication, representation, and reasoning. Students with ASD often demonstrate difficulties with these skills as a result of deficits in social communication, theory of mind, and executive functioning. Through a multiple probe across participants design, this study demonstrates that MSBI is an effective strategy to increase the use of mathematical practices for middle school students with ASD when solving multiplicative word problems. Four students eligible for special education services under the area of autism enrolled in sixth grade general education mathematics classes increased their use of mathematical practices for both problem types taught (multiplicative comparison and proportion), and maintained the use of some mathematical practices 4-8 weeks after intervention. Additionally, all four participants generalized their use of mathematical practices to novel multiplicative comparison problems containing extraneous information while three of the participants generalized mathematical practice skills to proportion problems containing extraneous information. Implications for practice are discussed.

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

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

**NOTE (Date of Defense):**April 30, 2019.

**NOTE (Keywords):**autism, intervention, mathematics

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

**NOTE (Advisory Committee):**Jenny R. Root, Professor Co-Directing Dissertation; Kelly Whalon, Professor Co-Directing Dissertation; FengFeng Ke, University Representative; Elizabeth Jakubowski, Committee Member.

**SUBJECT:**Special education

**DEGREE:**Doctoral

## Record number: 43

**FILENAME:**Cukadar\_fsu\_0071E\_15052.pdf

**TITLE:**An Evaluation of Four Methods for Determining the Number of Factors Underlying Measurement Indicators under the Presence of Guessing Effects

**AUTHOR:**Cukadar, Ismail

**MEMBER (professor directing dissertation):**Yang, Yanyun

**MEMBER (university representative):**Huffer, Fred W. (Fred William)

**MEMBER (committee member):**Becker, Betsy Jane, 1956-

**MEMBER (committee member):**Binici, Salih, 1974-

**MEMBER (committee member):**Paek, Insu, (Professor of measurement and statistics)

**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 (152 pages)

**ABSTRACT:**In factor analysis, determining the number of factors underlying measurement indicators is important. An incorrect decision on the number of factors may mislead practitioners in terms of estimating parameters in factor analysis, reporting students’ scores, calibrating items through an item response theory model, equating or linking different test forms, estimating reliability, examining differential item functioning, and investigating validity. Exploratory factor analysis, parallel analysis, Kaiser’s rule, and Cattell’s scree test are commonly used methods for deciding on the number of factors in educational and psychological assessments. When a test consists of multiple-choice or ordinal-scaled items, some test takers might find the correct answers to the items through guessing. The guessing effect might impact the correlation coefficients among items. Thus, it might also impact the decisions on the number of factors via exploratory factor analysis, parallel analysis, Kaiser’s rule, and Cattell’s scree test. These four methods do not consider the guessing effects through modeling a guessing parameter when examining the dimensionality of data. The main purpose of this study is to investigate the impact of guessing on the performance of exploratory factor analysis, parallel analysis, Kaiser’s rule, and Cattell’s scree test in determining the number of factors underlying measurement indicators. Among these four methods, Cattell’s scree test is a subjective method because the determination of the elbow point in the scree plot requires the user to make a judgmental call. Therefore, another purpose of this study is to propose a method that may allow for a more objective evaluation of Cattell’s scree test, specifically, through calculating angles in the scree plot. A Monte Carlo study was conducted to examine the performance of exploratory factor analysis, Kaiser’s rule, parallel analysis, and the revised scree test in determining the dimensionality of data when guessing effects were present. The following design factors were manipulated: factor structure, sample size, test length, the number of factors, values of the pseudo-guessing parameters, and the correlation between factors. The study results showed that all four methods performed worse for determining the number of factors under the presence of guessing effects than under the absence of guessing effect. In other words, none of the four methods was robust to the presence of guessing effects. Among the four methods, parallel analysis performed the best. The study results also showed that all four methods tended to retain fewer factors as the guessing effects became greater. Across all levels of guessing effects, parallel analysis was the best method for identifying the number of factors under conditions with simple structures, while exploratory factor analysis using the chi-square difference test was the best method for determining the dimensionality of bifactor models. In terms of the methods for estimating polychoric correlations, the maximum likelihood and Bayesian methods performed almost identically and led to similar estimated numbers of factors via the four methods. The current study design indicated that two different cutoff values were reasonable to use for determining the number of factors via the revised Cattell’s scree test: 161° for simple-structure models and 173° for bifactor models. The revised Cattell’s scree test performed better for determining the number of factors under conditions with simple structures than with bifactor models using these two cutoff values. Although practitioners and researchers may consider using the revised Cattell’s scree test to evaluate a scree plot in a more objective way, it is important to use the indicated cutoff values with caution in that they may not be applicable under other study conditions.

**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):**April 18, 2019.

**NOTE (Keywords):**Cattell's scree test, Exploratory factor analysis, Guessing effects, Kaiser's rule, Number of factors, Parallel analysis

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

**NOTE (Advisory Committee):**Yanyun Yang, Professor Directing Dissertation; Fred W. Huffer, University Representative; Betsy J. Becker, Committee Member; Salih Binici, Committee Member; Insu Paek, Committee Member.

**SUBJECT:**Educational tests and measurements

**DEGREE:**Doctoral

## Record number: 44

**FILENAME:**Dan\_fsu\_0071E\_15333.pdf

**TITLE:**Origin of Intrinsic Selectivity in F-Block Complexes

**AUTHOR:**Dan, David

**MEMBER (professor directing dissertation):**Albrecht-Schmitt, Thomas E.

**MEMBER (university representative):**Fajer, Piotr G.

**MEMBER (committee member):**Hu, Yan-yan

**MEMBER (committee member):**Stiegman, Albert E., 1953-

**MEMBER (committee member):**Dalal, Naresh S.

**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 (113 pages)

**ABSTRACT:**This dissertation seeks to determine fundamental differences between lanthanides and actinides, as well as how their bonding influences ligand selectivity, for possible actinide separations from nuclear waste. The f-elements are significantly understudied when compared to other parts of the periodic table such as the d-block. Research into the f-elements, and more specifically the 5f elements, has undergone a renaissance of sorts with steadily increasing interest over the past few decades. It was previously predicted that the chemistry for later actinides was identical to that of their lanthanide counterparts. However, a review by Neidig et al., “The covalency in f-element complexes”, helped introduce the concept of a greater degree of covalency in the actinides than in the lanthanides, creating a substantial dividing point for chemists to explore.1 The goal of this work is to shed further light on how later actinides behave and can be utilized. These new findings could help in the design of future separations techniques and materials. The first half of my dissertation will focus on the bonding in later actinides. I focus on an americium and californium complex [M(EtBTP)3][BPh4]3•3CH3CN (M = Am, Cf) (EtBTP = ethyl bistriazinyl pyridine). I also compare the [Am(EtBTP)3]3+ to its neodymium analog. Structural analysis of these complexes revealed that these compounds contain M3+ cations bound by tridentate EtBTP ligands, to create a tricapped trigonal prismatic geometry around the metal centers. Collection of high-resolution, single crystal X-ray diffraction data also allowed for reduction in bond distance estimated standard deviation (esd’s) such that a slight contraction of Δ = 0.0158(18) Å in the Am‒N versus Nd‒N bond distances is observed, even though these cations ostensibly have matching ionic radii. Theoretical evaluation revealed enhanced metal-ligand bonding through back donation in the [Am(EtBTP)3]3+ complex that is absent in [Nd(EtBTP)3]3+. The [Cf(EtBTP)3]3+ complex was also compared to its lanthanide analogs, gadolinium and erbium. Upon analysis of these complexes, Cf showed significantly stronger bonding than Gd and Er. The contractions of some of the Cf bonds with the nitrogen atoms on EtBTP, revealed that Er could be a better analog for Cf complexes that are expected to have greater covalent characteristics. These two studies provide new information about how Cf and Am bond to ligands, and reveal how they differ from their lanthanide analogs. The second half of this dissertation centers on possible applications for f-block ligands. The two main points of interest are photochromic properties of [M(EtBTP)3][BPh4]3•3CH3CN (M = La, Eu, Gd, Yb) complexes, as well as a dithioamide ligand with possible separations applications. The [M(EtBTP)3][BPh4]3•3CH3CN (M = La, Eu, Gd, Yb) complexes exhibit a long-lived color change when exposed to intense light. This color change lasts on the order of hours, and increases in length as you go across the series. This color change is caused by a radical formation upon exposure to light. The long-lived nature of this color change is attributed to a trapped triplet excited state, with a relaxation that is moderated by the metal center. This shows the versatility of EtBTP and how it can be used in possible photochromic materials. The practicality of dithioamides as ligands for separations has yet to be greatly understood. The dithioamides were compared to their diamide counterparts, and the dithioamides showed greater selectivity for AmIII over EuIII. This selectivity is due to the softer donor properties of the sulfur atoms. This study showed the merit of studying other sulfur donor ligand systems for use in actinide extractions.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Actinides, Lanthanides

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

**NOTE (Advisory Committee):**Thomas E. Albrecht-Schmitt, Professor Directing Dissertation; Piotr Fajer, University Representative; Yan-Yan Hu, Committee Member; Albert E. Stiegman, Committee Member; Naresh Dalal, Committee Member.

**SUBJECT:**Chemistry, Inorganic

**DEGREE:**Doctoral

## Record number: 45

**FILENAME:**Dasgupta\_fsu\_0071E\_15347.pdf

**TITLE:**Shape Based Function Estimation

**AUTHOR:**Dasgupta, Sutanoy

**MEMBER (professor co-directing dissertation):**Srivastava, Anuj, 1968-

**MEMBER (professor co-directing dissertation):**Pati, Debdeep

**MEMBER (university representative):**Klassen, E. (Eric), 1958-

**MEMBER (committee member):**Huffer, Fred W. (Fred William)

**MEMBER (committee member):**Wu, Wei

**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 (128 pages)

**ABSTRACT:**Estimation of functions is an extremely rich and well-researched topic of research with broad applications spanning several scientific fields. We develop a shape based framework for probability density and general function modelling. The framework encompasses both shape constrained and unconstrained estimation, and can accomodate a much broader notion of shape constraints than has been considered in literature. The estimation approach is a two step process where the first step creates a template or an initial guess, and the second important step ``improves" the estimate according to an appropriate objective function. We derive asymptotic properties of the estimators in different scenarios, and illustrate the performance of the estimate through several simulation as well as real data examples.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**June 21, 2019.

**NOTE (Keywords):**Density Estimation, Electricity Load Forecasting, Function Estimation, Shape constrained Estimation

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

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

**SUBJECT:**Statistics

**DEGREE:**Doctoral

## Record number: 46

**FILENAME:**Daucourt\_fsu\_0071N\_15441.pdf

**TITLE:**The Home Math Environment and Math Achievement: A Meta-Analysis

**AUTHOR:**Daucourt, Mia Cristina

**MEMBER (professor directing thesis):**Hart, Sara, (Professor of Psychology)

**MEMBER (committee member):**Ganley, Colleen M.

**MEMBER (committee member):**Meyer, Alexandria

**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 (121 pages)

**ABSTRACT:**Mathematical thinking is in high demand in the global market, but compared to their international peers, U.S. school children fail to meet math performance benchmarks. This is especially problematic, given that early math skills predict later success in math and reading, beyond the effects of early reading skills and that math difficulties prior to formal schooling make it unlikely that children who start off behind will catch up. The home math environment (HME), which includes all math-related activities, attitudes, expectations, resources, and interactions between parents and children in the home, provides a potentially promising way to promote children’s early math development. In order to understand the role played by the HME in children’s math abilities, the a pre-registered meta-analysis was conducted to estimate the average weighted correlation coefficient, r between the HME and children’s math achievement and the sample, assessment, and study features that contribute to study heterogeneity. A multilevel correlated effects model was run on 51 studies and a total of 456 effect sizes, which found a positive, significant average weighted correlation of r = .14, p < .0001. Although the association found was low in magnitude, our combined sensitivity analyses showed that the present findings were robust, and that the sample of studies has evidential value. Interestingly, moderator analyses revealed that all moderators tested contributed to study heterogeneity and when the HME component moderation analyses were run, no significant between-study heterogeneity remained.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**achievement, home learning, home math environment, mathematics, math talk

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

**NOTE (Advisory Committee):**Sara A. Hart, Professor Directing Thesis; Colleen Ganley, Committee Member; Alexandria Meyer, Committee Member.

**SUBJECT:**Developmental psychology

**SUBJECT:**Education

**SUBJECT:**Mathematics

**DEGREE:**Masters

## Record number: 47

**FILENAME:**Davis\_fsu\_0071E\_15413.pdf

**TITLE:**Quench Protection of Bi2Sr2Cacu2O8+X High Temperature Superconducting Magnets

**AUTHOR:**Davis, Daniel S. (Daniel Scott)

**MEMBER (professor co-directing dissertation):**Larbalestier, D. (David)

**MEMBER (professor co-directing dissertation):**Chiorescu, Irinel

**MEMBER (committee member):**Trociewitz, Ulf P (Ulf Peter Trociewitz)

**MEMBER (committee member):**Owens, Joseph F. (Joseph Francis), III, 1946-

**MEMBER (committee member):**Riley, Mark A.

**MEMBER (university representative):**Latturner, Susan

**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 (141 pages)

**ABSTRACT:**High temperature superconductors (HTS) allow for the construction of magnets generating fields of more than 30 T, enabling the investigation of new phenomena in condensed matter science and high energy physics. High field magnets store large amounts of energy that must be dissipated if the field collapses, but HTS materials require large quantities of heat for transitioning to the normal state. This makes HTS conductors very stable against fluctuations, yet difficult to protect from extreme temperature rise in the case that something generates a propagating normal or resistive zone in the magnet, i.e. quenches the superconductor. As HTS conductor is much more expensive than normal conductors or low temperature superconductors (LTS), protecting even prototype research coils and especially large-scale user solenoids and accelerator dipoles is paramount. Recently, a quench protection system relying on interfilament coupling currents within superconductors has been developed with LTS magnet systems. Coupling-loss induced quench (CLIQ) protection attempts to safely distribute the stored energy of a superconducting magnet over a larger volume by quickly bringing a significant fraction into the normal state by introducing oscillating currents into sections of the magnet generating heat due to the rapidly varying magnetic field. As HTS have larger energy margins to the normal state, in addition to different AC loss characteristics and conductor geometries, experiments and simulations are underway to evaluate and optimize AC loss induced quench for each conductor. Addressing the pressing need for reliable high field HTS magnets, presented here are the results for implementing these systems in magnets made from Bi2Sr2CaCu2O8+x (Bi-2212), which is the practical HTS most similar to LTS in both single strand and cable designs. Recent advances in the current carrying capacity of Bi-2212 (>1000 A mm^-2 at 5 T) due to improved starting powder and over-pressure heat treatment make this HTS appealing for large-scale magnet projects. Long sample conductor property measurements are underway to investigate if Bi-2212 has consistent electrical and mechanical properties along its length. Collaboration between the National High Magnetic Field Laboratory (NHMFL) and Lawrence Berkeley National Laboratory (LBL) has allowed for testing on world-record sub-scale accelerator dipoles and test coils for a program working towards generating more than 1 GHz NMR spectra and fields in excess of 30 T.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Bi-2212, coupling-loss induced quench, magnet, quench protection, superconductivity

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

**NOTE (Advisory Committee):**David C. Larbalestier, Professor Co-Directing Dissertation; Irinel Chiorescu, Professor Co-Directing Dissertation; Ulf P. Trociewitz, Committee Member; Joseph F. Owens, III, Committee Member; Mark A. Riley, Committee Member; Susan E. Latturner, University Representative.

**SUBJECT:**Physics

**SUBJECT:**Condensed matter

**DEGREE:**Doctoral

## Record number: 48

**FILENAME:**Delehanty\_fsu\_0071E\_15203.pdf

**TITLE:**Associations among Child Gestures and Developmental Outcomes in Toddlers with and without Autism Spectrum Disorder during a Home Observation

**AUTHOR:**Delehanty, Abigail Diane

**MEMBER (professor directing dissertation):**Wetherby, Amy M.

**MEMBER (university representative):**Slate, Elizabeth H.

**MEMBER (committee member):**Cripe, Juliann J. Woods, 1952-

**MEMBER (committee member):**Ingvalson, Erin

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Communication and Information

**CORPORATE NAME:**School of Communication Science and Disorders

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

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

**ABSTRACT:**Limited research has examined the gesture use of young children with and without autism spectrum disorder (ASD) in a home-based setting. Observation in the natural environment can supplement assessments that take place in structured clinical contexts and may provide useful information about a child’s strengths and needs and the family’s preferred activities and intervention priorities. This study documented the rates and relative frequencies of communicative acts, with a special focus on gestures, used by a sample of 211 toddlers who participated in everyday activities with a caregiver during a video recorded home observation at around 20 months of age. Participants were identified through prospective screening in the general population and diagnosed at approximately age 3 with ASD, non-ASD developmental delays (DD), or typical development (TD). Group differences were found on several measures of communication, including types of communicative acts, modes of communication used, and communicative functions expressed. Children with ASD, DD, and TD were observed to differ significantly on overall rate of communication during the home observation. Children with ASD used deictic gestures, non-word vocalizations, gesture + vocalization combinations, and communicative acts for behavior regulation at significantly lower rates than children with DD and TD. Rates of communication across different everyday activities in the home environment generally followed patterns of overall rate, with some exceptions. Statistically significant concurrent and predictive associations were observed between communicative acts at home and archival measures of social communication, developmental level, adaptive behavior, and autism symptoms. Finally, inventory of gestures was observed to have significant relationships with all archival measures. Results of this study have implications for both early identification of and early intervention for children with communication delays and ASD.

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

**NOTE (Degree Awarded):**null.

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

**NOTE (Keywords):**autism spectrum disorder, early identification, gestures, home observation, toddlers

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

**NOTE (Advisory Committee):**Amy M. Wetherby, Professor Directing Dissertation; Elizabeth Slate, University Representative; Juliann J. Woods, Committee Member; Erin Ingvalson, Committee Member.

**SUBJECT:**Speech therapy

**DEGREE:**Doctoral

## Record number: 49

**FILENAME:**Derry\_fsu\_0071N\_15434.pdf

**TITLE:**Developing a Conceptual Framework for Adolescent Vocabulary Intervention: A Scoping Review

**AUTHOR:**Derry, May McGee

**MEMBER (professor co-directing thesis):**Hall-Mills, Shannon S.

**MEMBER (professor co-directing thesis):**Morris, Richard Jack, 1950-

**MEMBER (committee member):**Tibi, Sana

**MEMBER (committee member):**Therrien, Michelle

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Communication and Information

**CORPORATE NAME:**Department of Communication Sciences and Disorders

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

**PHYSICAL DESCRIPTION:**1 online resource (127 pages)

**ABSTRACT:**The aim of the present study was to complete a scoping review of current research on adolescent vocabulary intervention across settings in order to develop a nascent conceptual framework for oral and written, expressive and receptive adolescent vocabulary intervention. Such a tool could be beneficial for speech-language pathologists (SLPs) and teachers to utilize as they address the vocabulary, language, and literacy needs of diverse students in unique settings. Synthesis was completed first through a multiple database search of literature between 2003 and 2018. Studies were narrowed down from 811 to 17 based on inclusion and exclusion criteria and analyzed using a rubric which outlined characteristics of the interventions and their service delivery. From this information a synthesis and analysis of studies’ commonalities and differences was created, and implications were discussed. Some implications include the need for unified definitions of vocabulary skill measurement across the field of speech-language pathology, the use of multimodal approaches to intervention that incorporate collaboration and the reading of each student’s reality, and drawing upon social validity measures in order to create more effective interventions. Conclusions, limitations, and future research are discussed further, as well as the concept of creating a conceptual framework for adolescent vocabulary intervention which could become a tool for SLPs and teachers.

**NOTE (Submitted Note):**A Thesis submitted to the Department of Communication Sciences and Disorders in partial fulfillment of the requirements for the degree of Master of Science.

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

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

**NOTE (Keywords):**adolescent, intervention, language impairment, semantic, speech pathology, vocabulary

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

**NOTE (Advisory Committee):**Shannon Hall-Mills, Professor Co-Directing Thesis; Richard Morris, Professor Co-Directing Thesis; Sana Tibi, Committee Member; Michelle Therrien, Committee Member.

**SUBJECT:**Speech therapy

**SUBJECT:**Education

**SUBJECT:**Middle school education

**DEGREE:**Masters

## Record number: 50

**FILENAME:**Devlin\_fsu\_0071E\_15081.pdf

**TITLE:**The Role of Age of Diagnosis, Self-Efficacy and Social Support in the Relationship between Bipolar Disorder and Substance Use Severity

**AUTHOR:**Devlin, Elizabeth Justine

**MEMBER (professor directing dissertation):**Ebener, Deborah J.

**MEMBER (university representative):**Thyer, Bruce A.

**MEMBER (committee member):**Dong, Shengli

**MEMBER (committee member):**Osborn, Debra S., 1968-

**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 (149 pages)

**ABSTRACT:**Bipolar disorder is one of the 10 most disabling conditions in the world. As such, inpatient hospitalization for individuals with bipolar disorder is far greater than hospitalization rates for all other patients with behavioral health diagnoses. Bipolar disorder is also associated with reduced lifespans of 9.2 years, and 1 in 5 individuals with bipolar disorder die by suicide. Such statistics are alarming and illuminate the impact of bipolar disorder on functioning and overall quality of life. However, the constructs of self-efficacy, social support, and age of onset may impact and lead to a decrease in substance use severity (i.e., alcohol and illicit drug use) for individuals with a bipolar disorder diagnosis. A sample of 91 participants was recruited from bipolar disorder support group websites and blogs for people with bipolar disorder. Measures for the current study included the bMAST, DAST-10, GSE, and SSA-S. Research questions included (1) Are self-efficacy, age of onset, and social support related to alcohol use severity for individuals with bipolar disorder? (2) Are self-efficacy, age of onset, and social support related to illicit drug use severity for individuals with bipolar disorder? Statistical analyses for the variables included two hierarchical multiple linear regressions. Due to violated assumptions for multiple linear regressions, a non-parametric analysis was run separately for each research question. No significant results were indicated for the research questions included in the study. For both ordinal logistic regressions, the models with all predictors (age of onset, self-efficacy, and social support) did not significantly improve compared to the intercept only models. Results of this study were discussed related to improvement for future research and implications for future practice.

**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):**April 17, 2019.

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

**NOTE (Advisory Committee):**Deborah Ebener, Professor Directing Dissertation; Bruce Thyer, University Representative; Shengli Dong, Committee Member; Debra Osborn, Committee Member.

**SUBJECT:**Psychology

**DEGREE:**Doctoral

## Record number: 51

**FILENAME:**Dietz\_fsu\_0071N\_15341.pdf

**TITLE:**Assessing Variation in Dispersal Decisions in a Cooperatively Breeding Passerine

**AUTHOR:**Dietz, Samantha Lauren

**MEMBER (professor directing thesis):**DuVal, Emily H.

**MEMBER (committee member):**Underwood, Nora C.

**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 (84 pages)

**ABSTRACT:**Natal dispersal, the period where an organism moves from its birthplace to the area where it settles and attempts to breed, may have significant consequences for individual fitness. Individuals vary in both the decision to initiate dispersal and the decision to settle and attempt reproduction. In cooperative species, some individuals delay their departure from the natal territory and forego reproduction for one or more breeding seasons, while others disperse much sooner. The timing of when individuals depart their natal site can affect their ability to locate and establish a breeding territory. Availability of local breeding sites, competition among the natal group, and an individual’s development are hypothesized to influence dispersal initiation. Once an individual departs the natal territory, they also must choose a settlement area that will affect their access to potential mates, resources, and exposure to predators. Understanding how a juvenile’s experience prior to dispersal influences their timing and settlement decisions may help explain variation in fitness among individuals within a population. Despite the importance of settlement site, individuals often appear to settle in low-quality habitat when high-quality habitat is available. The Natal Habitat Preference Induction hypothesis posits that individuals may choose breeding habitat that is similar to their natal habitat, rather than habitat of the highest quality. I investigated factors that influenced variation in dispersal behavior in a population of cooperatively breeding Brown-headed Nuthatches (Sitta pusilla) by addressing two questions: (1) What factors influence whether and when individuals depart from the natal territory? and (2) How do individuals make settlement decisions? I found that males dispersed earlier when they experienced more competition within the natal group, and females dispersed earlier when they were smaller in size relative to their siblings, and when local breeding opportunities were constrained. I found no evidence that individuals were choosing settlement sites based on habitat cues as predicted by the Natal Habitat Preference Induction hypothesis. My thesis broadens understanding of how multiple aspects of an individual’s experience might affect dispersal decisions, and assesses one hypothesis that potentially explains how dispersers make settlement decisions.

**NOTE (Submitted Note):**A Thesis submitted to the Department of Biological 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 24, 2019.

**NOTE (Keywords):**Cooperative Breeding, Natal Dispersal, Natal Habitat Preference Induction

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

**NOTE (Advisory Committee):**Emily H. DuVal, Professor Directing Thesis; Nora Underwood, Committee Member; Scott Burgess, Committee Member.

**SUBJECT:**Ecology

**DEGREE:**Masters

## Record number: 52

**FILENAME:**Dingess\_fsu\_0071E\_15104.pdf

**TITLE:**The Impact of Positive Psychology Coping Mechanisms on Stress Levels of Parents of Children with Autism Spectrum Disorder

**AUTHOR:**Dingess, Kara M.

**MEMBER (professor directing dissertation):**Ebener, Deborah J.

**MEMBER (university representative):**Hanline, Mary Frances

**MEMBER (committee member):**Osborn, Debra S., 1968-

**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 (155 pages)

**ABSTRACT:**Autism Spectrum Disorder (ASD) impacts one in every 59 children in the United States of America (CDC, 2018). Not only does ASD affect the life of the child, but it also impacts the lives of the child’s caretakers. Parental stress related to perceptions of symptom severity, the impact of the child’s diagnosis, fear of relapse, social stigma, cost of care, and daily stressors of simply having a child can impact the psychosocial well-being of the parents (Seltzer et. al., 2009; Woolfson, 2004). Gaining insight into coping mechanisms of parents of children with ASD allows the opportunity to increase awareness, create individualized intervention approaches, and provide families with the care they need. The aim of this dissertation was to explore the impact of humor, optimism, and spirituality on the stress levels of parents of children with ASD. Specifically, the goal was to determine if the use of the positive psychology constructs of humor, optimism, and spirituality were related to parental stress. An additional aim of the study was to determine if there were differences in parental stress by parental perception of symptom severity. The study examined three specific symptom severity levels for this question based upon DSM-V criteria for ASD. To collect data, a sample of adults with children with ASD were recruited via social media, then surveyed through the Qualtrics survey system. A standard multiple linear regression was used to examine whether humor, optimism, and spiritualty could predict parental stress. A one-way Analysis of Variance (ANOVA) was conducted to determine differences between parental perception of symptom severity on parental stress. The 7-item Coping Humor Scale (CHS; Lefcourt & Martin, 1986) was used to measure humor. The 10-item Life Orientation Test-Revised (LOT-R; Scheier, Carver, & Bridges, 1994) was used to measure optimism. The 20-item the Spiritual Well Being Scale (SWBS; Ellison, 1983; Ellison & Smith, 1991) was used to measure spirituality. The 36-item Parental Stress Index-Short Form (PSI-SF; Abidin, 1995) was used to measure parental stress. Participants (n =166) for the study were mostly comprised of females (n = 122) and individuals of Caucasian ethnicity (n =101). While mothers primarily represented the sample, there was a small representation of males (n = 39). Regarding the child’s diagnosis, ASD was most frequently reported (n = 122). The results of the study indicated the use of optimism as a positive coping mechanism predicted decreased levels of parental stress in parents of children with ASD, with 5.9% of the variance explained. However, the use of humor and spirituality were non-significant. The One-way ANOVA indicated groups differences between mild severity and severe severity in that those individuals with mild symptom severity perceptions experience more parental stress than those with severe symptom severity perceptions, with 4.9% of the variance explained. A discussion of the findings, limitations of the study, and implications for theory, practice, and research are provided.

**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):**April 11, 2019.

**NOTE (Keywords):**Autism, Humor, Optimism, Parental Stress, Positive Psychology, Spirituality

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

**NOTE (Advisory Committee):**Deborah Ebener, Professor Directing Dissertation; Mary Frances Hanline, University Representative; Debra Osborn, Committee Member; Shengli Dong, Committee Member.

**SUBJECT:**Counseling psychology

**DEGREE:**Doctoral

## Record number: 53

**FILENAME:**Dobrowolski\_fsu\_0071N\_15212.pdf

**TITLE:**Examining Oral Reading and Reading Comprehension in Aphasia

**AUTHOR:**Dobrowolski, Cathryn Elizabeth

**MEMBER (professor directing thesis):**Madden, Elizabeth Brookshire

**MEMBER (committee member):**Lansford, Katlin L.

**MEMBER (committee member):**Wagner, Richard K.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Communication and Information

**CORPORATE NAME:**School of Communication Science and Disorders

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

**PHYSICAL DESCRIPTION:**1 online resource (51 pages)

**ABSTRACT:**As the rate of stroke increases, the rate of aphasia, an acquired impairment of language and communication, also increases. Aphasia can result in many impairments, including alexia, or acquired reading difficulties. Yet, research in this area is relatively sparse. This study aimed to determine the relationships, interactions, and differences between oral reading and reading comprehension in 43 individuals with aphasia. Additionally, differences between oral reading and reading comprehension within and between alexia subgroups were examined. Results indicated a significant relationship between oral reading and reading comprehension, with oral reading predicting, to a significant degree, overall and single word reading comprehension performance. Results also showed overall reading comprehension was significantly better than overall oral reading. Regarding reading subgroups in the larger sample, findings included that individuals classified as reading within normal limits and those with more mild alexia (i.e., phonological alexia) demonstrated better reading comprehension across all reading levels when compared to those with more severe alexia types (i.e., deep and global alexia). Our findings regarding the strong relationship between oral reading and reading comprehension reinforces literacy theories, especially those of early childhood reading development. Our findings regarding differences between and within the alexia groups support alexia classifications and the respective impact of severity on reading comprehension. These findings are important to research regarding alexia, as the compiled evidence is relatively small considering the occurrence of the disorder and may be beneficial both academically and clinically regarding reading abilities in individuals with aphasia and alexia.

**NOTE (Submitted Note):**A Thesis submitted to the School of Communication Science and Disorders 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):**alexia, aphasia, oral reading, reading comprehension

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

**NOTE (Advisory Committee):**Elizabeth Madden, Professor Directing Thesis; Kaitlin Lansford, Committee Member; Richard Wagner, Committee Member.

**SUBJECT:**Speech therapy

**DEGREE:**Masters

## Record number: 54

**FILENAME:**Douty\_fsu\_0071E\_15145.pdf

**TITLE:**A Conductor's Guide to Selected Works by Female Composers for Chamber Wind Ensemble

**AUTHOR:**Douty, Michael Scott

**MEMBER (professor directing dissertation):**Clary, Richard

**MEMBER (university representative):**Clendinning, Jane Piper

**MEMBER (committee member):**Dunnigan, Patrick, 1957-

**MEMBER (committee member):**Kelly, Steven N.

**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 (155 pages)

**ABSTRACT:**The purpose of this project is to provide historical background, formal and thematic analysis, and technical performance considerations for selected works by female composers for chamber wind ensemble. Chapter 1 introduces the project, providing the rationale, the selection process for included compositions, and a summary of conventions utilized throughout the text. Chapters 2 through 5 each explore one of the following works and composers: Dixtuor pour instruments à vent by Claude Arrieu, Dos Danzas Latinas by Nancy Galbraith, Arsenal of Democracy by Julia Wolfe, and Wind Sinfonietta by Ruth Gipps. This document may be utilized by directors and/or conductors of academic or professional chamber ensembles to facilitate preparation of these works, thereby promoting an increasing number of performances for these distinguished compositions.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**June 24, 2019.

**NOTE (Keywords):**chamber, composer, composition, conductor, female, wind

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

**NOTE (Advisory Committee):**Richard Clary, Professor Directing Dissertation; Jane Piper Clendinning, University Representative; David Patrick Dunnigan, Committee Member; Steven Kelly, Committee Member; Clifford Madsen, Committee Member.

**SUBJECT:**Music

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

**DEGREE:**Doctoral

## Record number: 55

**FILENAME:**Eady\_fsu\_0071E\_15275.pdf

**TITLE:**On the Use of Conformal Mappings, Invariants and Warpings in Investigations of the Cortical Surface

**AUTHOR:**Eady, Carolyn M. (Carolyn Marie)

**MEMBER (professor directing dissertation):**Cogan, Nicholas G.

**MEMBER (university representative):**Stroupe, M. Elizabeth (Margaret Elizabeth)

**MEMBER (committee member):**Bowers, Philip L., 1956-

**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 (149 pages)

**ABSTRACT:**Brain mapping studies the structure and function of the brain through imaging techniques in an effort to relate function to specific anatomical regions. The highly folded nature of the human brain makes visualization difficult; thus neuroscientists desire quantitative methods to assist with characterization of anatomical differences between subjects. As cortical folding patterns are unique to each person, methods for quantifying differences across subjects are lacking. A first step in quantifying data is to define a normal, healthy brain in terms of both shape and function. Establishing spatial characteristics of a healthy brain, or an aggregate of healthy brains, will allow for better diagnosis and treatment of brain injuries and diseases. The research discussed in this thesis uses a two-dimensional, or ``flat", map of the cortical surface based on a three-dimensional reconstruction from medical images acquired using magnetic resonance imaging. Such mappings can be used to measure cross-subject differences, as well as the development of abnormalities in longitudinal studies of diseased patient brains. The ``flat" mappings we discuss are constructed using a mathematical approach known as circle packing. Our research makes use of conformal mappings and the properties preserved under them, defining ways to apply them to brain data. These conformally invariant properties take into account aspects of the three-dimensional shape of the surface which are not easily visualized, and allow us to quantify them in a two-dimensional result. In particular, we develop methods for calculation of extremal length and harmonic measure. We also give various forms of visualization of each invariant, and in some cases visualization of biological data in conjunction with our calculations. After calculating methods of comparison to be used indirectly, we offer two adaptations to an existing program which allow for the direct comparison of cortical surfaces. The data we use does not fit specific criteria of the program, so these adaptations are necessary to generalize the usage of the existing program. We again use the concept of circle packing for ``flat" mappings; however, the ingenuity of our adaptations lies in the connecting between these ``flat" maps. We follow a procedure for transforming the coordinates of a source surface into those of a destination surface, through a system of weighting vertices by barycentric or gyrobarycentric coordinates. Though our research focuses on a small region of the human brain, we proceed with the expectation that all methods can be generalized to other regions of the brain. As many psychological disorders have structural manifestations, the research can be used to investigate anomalies in brain data for such illnesses. Additionally, the methods we provide can be further generalized to surfaces other than the brain, laying groundwork for use in general investigations of two and three-dimensional surfaces.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**biomathematics, brain mapping, conformal, mathematical biology

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

**NOTE (Advisory Committee):**Nicholas G. Cogan, Professor Directing Dissertation; M. Elizabeth Stroupe, University Representative; Philip L. Bowers, Committee Member; Washington Mio, Committee Member.

**SUBJECT:**Mathematics

**SUBJECT:**Biology

**DEGREE:**Doctoral

## Record number: 56

**FILENAME:**Edmonds\_fsu\_0071E\_15320.pdf

**TITLE:**Revitalizing Feminist Ethics for Composition Studies: from Standpoint to Epistemology

**AUTHOR:**Edmonds, Julianna L.

**MEMBER (professor directing dissertation):**Graban, Tarez Samra

**MEMBER (university representative):**Sinke, Suzanne M.

**MEMBER (committee member):**Fleckenstein, Kristie S.

**MEMBER (committee member):**Lathan, Rhea Estelle, 1961-

**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 (237 pages)

**ABSTRACT:**In this study, I re-theorize identity and self-positioning as central focuses of feminist composition pedagogy by building a theory of ethos as epistemology within writing studies. My study moves ethos beyond a mere rhetorical strategy by posing it as a way of knowing. Thus, I analyze the concept of ethos as a feminist way of teaching and ultimately present a fuller theory of feminist ethos that draws on ecological and epistemic frameworks to re-conceptualize how the ancient concept could be employed as a teachable habit within TA preparation programs and within the feminist composition classroom. This study contributes to conversations in composition studies, first-year composition, feminist rhetorics, and multiculturalism, and in doing so, it seeks to foreground the importance of rhetorical knowledge and epistemic diversity within composition pedagogy. While the first three chapters of my study present a revitalized theory of ethos as epistemology, in the concluding chapters, the project gathers information about how Florida State University composition instructors understand and implement two things in their college composition classrooms: (1) feminist rhetorical principles; and (2) the concept of ethos –understood in pragmatic terms as “tone,” “voice,” “personal appeal,” “credibility,” but more recently considered in feminist rhetorical theory as an embodied dimension of selfhood that reflects the changing subject positions and locations from which all rhetors speak and compose. In short, my project enacts a combination of empirical and theoretical methods: first I build a theoretical model of ethos as epistemology within writing studies by situating the concept within the following theoretical conversations: feminist pedagogy, epistemology, critical race theory, intersectionality, and multiculturalism. As I theorize ethos alongside these theoretical conversations, I attend to the ways that identity is flattened, especially within studies of multiculturalism and intersectionality. Then I collect and analyze instructors’ responses to questions about their major epistemological leanings in pedagogy and patterns of practice in order to make speculative conclusions about how the theoretical model could potentially be taken up within new instructor preparation programs. In addition to surveying current FSU composition instructors to trace patterns in their understandings of feminist pedagogy, I collect and analyze sets of classroom teaching materials (syllabi, assignment sheets, classroom activities) in order to consider how instructors create opportunities for students to craft ethos within the curricula they build. My study begins from the guiding premise that teachers are learners (especially within the learning site of TA preparation), and that premise guides my theorizing. From that theorizing, I aim to consider how this model of ethos as epistemology could be used within TA preparation specifically to shape those perceptions and misperceptions of TAs. Therefore, my interest in teacher perceptions is a motivating interest and a potential useful outcome for creating a model of ethos as epistemology within writing studies. Considering the implications of this theory-building on TA preparation also interrogates the idea of liminality, as pre-service TA preparation is a site of convergence for these co-existing identities of teacher and student.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**June 24, 2019.

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

**NOTE (Advisory Committee):**Tarez Samra Graban, Professor Directing Dissertation; Suzanne Sinke, University Representative; Kristie Fleckenstein, Committee Member; Rhea Lathan, Committee Member.

**SUBJECT:**Rhetoric

**DEGREE:**Doctoral

## Record number: 57

**FILENAME:**Edralin\_fsu\_0071E\_14824.pdf

**TITLE:**The Relationships among Personality Factors, Negative Career Thoughts, and Profile Elevation

**AUTHOR:**Edralin, Christine

**MEMBER (professor directing dissertation):**Lenz, Janet G., 1953-

**MEMBER (university representative):**McWey, Lenore M.

**MEMBER (committee member):**Osborn, Debra S., 1968-

**MEMBER (committee member):**Sampson, James P.

**MEMBER (committee member):**Dozier, V. Casey (Virginia Casey)

**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, 2018

**PHYSICAL DESCRIPTION:**1 online resource (171 pages)

**ABSTRACT:**The present study examined personality factors in relation to negative career thoughts and profile elevation. Study participants (n = 128) were undergraduate students enrolled in five sections of a career development course at a large, public, Southeastern university. The NEO Five-Factor Inventory-3 Form S (NEO FFI-3 Form S; McCrae & Costa, 2010) was used to measure the five factors of personality (Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness). The Career Thoughts Inventory (CTI; Sampson et al., 1996a) was used to measure negative career thoughts and the Standard Self-Directed Search (StandardSDS; Holland & Messer, 2017) was used to measure profile elevation. A hierarchical multiple regression analysis was conducted to determine if the five personality factors (Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness) on the NEO FFI-3 were predictors of negative career thoughts (CTI Total Score). Results of the hierarchical multiple regression showed that 27.1% of the variability in the CTI Total Score was explained by the combined effect of Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness. Neuroticism and Conscientiousness were the only statistically significant predictors of the CTI Total Score. In addition, a simple linear regression was conducted to determine if negative career thoughts (CTI Total Score) predicted profile elevation on the StandardSDS. The simple linear regression results showed that 3.6% of the variance in profile elevation could be explained by the CTI Total Score. Finally, a hierarchical multiple regression analysis was conducted to determine if the five personality factors (Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness) on the NEO FFI-3 and negative career thoughts (CTI Total Score) predicted profile elevation on the StandardSDS. The hierarchical regression revealed that 38.0% of the variability in profile elevation was explained by Openness, Extraversion, Conscientiousness, Neuroticism, CTI Total Score, and Agreeableness. Openness was found to be the strongest predictor of profile elevation, followed by Agreeableness, Conscientiousness as the third strongest, and Extraversion as the fourth strongest predictor of profile elevation. Additional analyses showed that 7.9% of the variance in profile elevation could be explained by DMC. Additional analyses also revealed a significant positive relationship between Neuroticism and DMC, as well as significant negative relationships among DMC, Extraversion, and Conscientiousness. A significant positive correlation was found between Neuroticism and CA, as well as a significant negative correlation between Conscientiousness and CA. Finally, a significant positive correlation was found between Neuroticism and EC, as well as significant negative correlations among EC and Extraversion, Agreeableness, and Conscientiousness. A discussion of the study’s findings and limitations are offered. Lastly, implications for theory, practice, and future research are included.

**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):**Summer Semester 2018.

**NOTE (Date of Defense):**May 23, 2018.

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

**NOTE (Advisory Committee):**Janet G. Lenz, Professor Directing Dissertation; Lenore M. McWey, University Representative; Debra S. Osborn, Committee Member; James P. Sampson, Jr., Committee Member; V. Casey Dozier, Committee Member.

**SUBJECT:**Psychology

**DEGREE:**Doctoral

## Record number: 58

**FILENAME:**Edwards\_fsu\_0071N\_15289.pdf

**TITLE:**The Processes Underlying Ran Predicting Reading Fluency

**AUTHOR:**Edwards, Ashley Ann

**MEMBER (professor directing thesis):**Schatschneider, Christopher

**MEMBER (committee member):**Hart, Sara, (Professor of Psychology)

**MEMBER (committee member):**Cabell, Sonia Q.

**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 (32 pages)

**ABSTRACT:**Previous research has shown rapid serial naming to be predictive of reading fluency, although the mechanisms underlying this connection are much less established. Despite the strong relationship with rapid serial naming (RAN), oral reading fluency is much less predicted by isolated naming (IN). Since the requirements involved in completing these tasks are similar, yet differ in their predictive abilities, the sources of this predictive power must lay in the differences between these tasks. The present study investigates these differences to attempt to determine the specific underlying processes that make rapid serial naming predictive of reading fluency. Results showed no significant difference in correlation with the addition of an underline to a RAN task to help keep track of the current location and location tracking did not mediate the relationship between RAN and ORF suggesting that individual differences in location tracking abilities may not explain the relationship between RAN and ORF. Furthermore, no significant difference in correlation was observed between ORF and IN and ORF and either of the cluttered IN tasks. This suggests that the cluttered visual scene may not explain the difference in ability to predict ORF between IN and RAN. Lastly, no difference in correlation with ORF was observed for three different IN gap sizes. Implications of these unexpected findings are discussed.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**isolated naming, rapid naming, reading fluency, serial naming

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

**NOTE (Advisory Committee):**Christopher Schatschneider, Professor Directing Thesis; Sara A. Hart, Committee Member; Sonia Q. Cabell, Committee Member.

**SUBJECT:**Developmental psychology

**DEGREE:**Masters

## Record number: 59

**FILENAME:**Engstrand\_fsu\_0071E\_15310.pdf

**TITLE:**Intermetallic Carbides, Borides, and Carbide Hydrides from Re/Ni Fluxes (Re = La, Pr)

**AUTHOR:**Engstrand, Tate O. (Tate Owen)

**MEMBER (professor directing dissertation):**Latturner, Susan

**MEMBER (university representative):**Siegrist, Theo

**MEMBER (committee member):**Albrecht-Schmitt, Thomas E.

**MEMBER (committee member):**Stiegman, Albert E., 1953-

**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 (110 pages)

**ABSTRACT:**Metal flux synthesis is a useful technique for the discovery of novel intermetallic phases. The molten state enhances diffusion rates which improves rates of reaction. Reactions can proceed at lower temperatures, allowing for the observation of metastable phases. The technique also allows favorable conditions for single crystal growth. In this work, two mixed metal fluxes were explored. The first was a Pr/Ni binary mixture in a 3:1 ratio, melting at a temperature of 525 °C. The mixture acted as a solvent for iron and other transition metals to react with main group elements. The second was a binary La/Ni eutectic 67% rich in lanthanum, m.p. 517 °C. This latter flux was used to grow an intermetallic carbide using anthracene as a reactant. Reactions of silicon and phosphorus with iron and carbon in the Pr/Ni binary mixture produced phases of the new structure type Pr62Fe21M16C32 (M = Si, P) in the P4/mmm space group (a = 15.584(2) Å, c = 11.330(1) Å for the Si analog). These compounds have a zeolite-like iron carbide framework of corner-sharing FeC3 subunits filled with a cationic Pr/M network. Building blocks in the structure were found to be in common with those in Pr21Fe8Si7C12, a new analog of the previously reported La21Fe8Sn7C12. Magnetic susceptibility measurements and band structure calculations for Pr62Fe21Si16C32 indicate that the iron atoms in the compound are not magnetic; the low temperature complex antiferromagnetic ordering is due to the Pr3+ ions. Conversely, both iron and praseodymium moments contribute to the magnetic behavior of Pr21Fe8Si7C12. Pr/Ni flux reactions with tellurium, iron and boron resulted in the intermetallic phase with new structure type Pr21Fe16Te6B30 in the cubic space group P-43m (a = 10.61709 Å). Initially, the phase appeared to grow in the Pm-3m space group, but bond length analysis indicated the growth of the phase was subject to twinning. The P-43m local structure was verified by TEM measurements. The phase features Fe16B30 clusters composed of an Fe16 Friauf polyhedron surrounded by a complex network of boron atoms. Adjacent Fe16B30 clusters are bridged by boron-boron dimers and are surrounded by a cationic Pr/Te network. Both the praseodymium ions and the iron contribute to the effective magnetic moment of this compound. Reactions of iron and anthracene in a La/Ni flux produced the new metal carbide La15(FeC6)4H. Anthracene acts as a carbon and hydrogen source. The presence of hydride in the product was indicated by single crystal X-ray diffraction and probed by 1H MAS NMR.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**borides, carbide hydrides, carbides, flux chemistry, flux synthesis, intermetallics

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

**NOTE (Advisory Committee):**Susan E. Latturner, Professor Directing Dissertation; Theo Siegrist, University Representative; Thomas E. Albrecht-Schmitt, Committee Member; Albert E. Stiegman, Committee Member.

**SUBJECT:**Materials science

**SUBJECT:**Chemistry

**SUBJECT:**Chemistry, Inorganic

**DEGREE:**Doctoral

## Record number: 60

**FILENAME:**Ennis\_fsu\_0071E\_15309.pdf

**TITLE:**Differential Effects of Emotional State on Physiological Arousal and Pain Perception among Individuals Who Enagage in Nonsuicidal Self-Injury

**AUTHOR:**Ennis, Chelsea R. (Chelsea Rhianon)

**MEMBER (professor directing dissertation):**Taylor, Jeanette E.

**MEMBER (committee member):**Joiner, Thomas, Jr.

**MEMBER (committee member):**Franklin, Joseph

**MEMBER (committee member):**Boot, Walter Richard

**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 (74 pages)

**ABSTRACT:**Individuals engage in nonsuicidal self-injury (NSSI) to decrease intense negative emotions. Notably, self-injurers are more likely to engage in NSSI in the context of certain emotions (i.e., anger, rejection, guilt). This may be partially explained by the fact that anger is related to increased physiological arousal relative to other emotions (i.e., sadness). However, this hypothesis has yet to be tested among those who engage in NSSI. The current study addressed gaps in the literature regarding the effect of specific emotions on physiological arousal and pain perception by inducing several emotional states, including anger, sadness, happiness, and a neutral emotion. Hypotheses were tested among 92 females with a history of NSSI. The hypotheses that participants in the anger condition would have the highest physiological arousal during the emotion induction and following pain offset was not supported. Additionally, the hypothesis that individuals in the anger condition (relative to the other emotion conditions) would have significantly higher pain threshold, pain tolerance, and pain endurance, and significantly decreased pain threshold intensity was also not supported. The current investigation is the first study to examine the interplay between emotions, arousal, and pain among those who engage in NSSI and has several implications.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Emotion induction, Nonsuicidal self-injury, Pain perception, Physiological arousal, Self-harm

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

**NOTE (Advisory Committee):**Jeanette Taylor, Professor Directing Dissertation; Tomi Gomory, University Representative; Thomas E. Joiner, Committee Member; Joseph Franklin, Committee Member; Walter Boot, Committee Member.

**SUBJECT:**Clinical psychology

**DEGREE:**Doctoral

## Record number: 61

**FILENAME:**Fan\_fsu\_0071E\_15268.pdf

**TITLE:**Characterization of Linc Complex Assembly in Budding Yeast

**AUTHOR:**Fan, Jinbo

**MEMBER (professor directing dissertation):**Yu, Hong-Guo

**MEMBER (university representative):**Wang, Yanchang, (Biomedical Sciences Professor)

**MEMBER (committee member):**Bass, Hank W.

**MEMBER (committee member):**Chadwick, Brian P.

**MEMBER (committee member):**McGinnis, Karen M.

**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 (106 pages)

**ABSTRACT:**The linker of the nucleoskeleton and cytoskeleton (LINC) protein complex bridges the inner and outer nuclear membranes and regulates a range of nuclear activities that include telomere tethering and chromosome movement. The canonical LINC complex is composed of a pair of transmembrane-domain proteins, with the KASH protein localized to the outer nuclear membrane, and the SUN protein to the inner nuclear membrane. In budding yeast, Csm4, which is specific to meiosis, and Mps2 are two KASH-like proteins, whereas Mps3 is the sole SUN protein. The current notion posits that Mps3 pairs with either Csm4 or Mps2 to form separate LINC complexes at the telomere and the centrosome, respectively. Here we show that Mps2 mediates the interaction between Csm4 and Mps3 to form a functional heterotrimeric composition of LINC complex that regulates telomere attachment and meiotic recombination. Csm4 binds to Mps2, and both localize to telomeres. Csm4's localization depends on Mps2 and Mps3, but Mps2's association with the telomere depends on Mps3 but not Csm4. The Mps2-mediated heterotrimeric LINC complex controls nuclear shape, telomere bouquet formation, recombination, and homolog pairing in prophase I. These findings reveal the heterotrimeric composition of the yeast LINC complex and have implications for understanding LINC variants in higher eukaryotes. To further characterize the heterotrimeric LINC complex, we have reconstructed the meiotic LINC complex in vegetative yeast cells by ectopically expressing Csm4. In the wild-type cells, both Mps2 and Mps3 are concentrated at the centrosome. In the presence of Csm4, Mps2 and Mps3 form “mitotic patches” at the leading edge of the budding daughter cell during mitosis. Importantly, the presence of Mps3 patch depends on Mps2, while the presence of Mps2 patch does not depend on Mps3, demonstrating that Mps3’s interaction with Csm4 requires Mps2. Furthermore, we show that the Mps2/Mps3 patch is absent in yeast cells treated with the actin depolymerizing drug latrunculin B, indicating that ectopic t-LINC formation in vegetative cells depends on actin. These findings support our meiotic model in which the yeast telomere-associated LINC complex is composed of Mps3, Mps2, and Csm4. Finally, we have revealed that Csm4 is a short-lived protein, whose degradation appears to regulate meiotic telomere-associated LINC complex disassembly. The protein level of Csm4 peaks during prophase I but is barely detectable by Western blotting after metaphase I. We hypothesize that the disassembly of the yeast telomere-associated LINC complex is regulated by the degradation of Csm4. To test this hypothesis, a targeted genetic screen was performed and two CSM4 interacting factors were identified, UBC7 and DOA10, which encode the E2 ubiquitin conjugating enzyme and the E3 ligase of the endoplasmic-reticulum-associated protein degradation (ERAD) pathway, respectively. These findings therefore provide a clue to how the yeast telomere-associated LINC complex is downregulated during the cell cycle. In summary, we show that a heterotrimeric LINC complex is assembled at the telomere in budding yeast meiosis, and Mps2 is the linker between Mps3 and Csm4. Our work not only clarifies the composition and function of the telomere-associated LINC complex in budding yeast, but also provides implications for LINC variant formation in other organisms. In addition, we show that the KASH-like protein Csm4 is likely subject to ERAD pathway regulation for protein turnover, which may provide a mechanism for LINC complex disassembly during the cell cycle.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**ERAD, KASH protein, LINC complex

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

**NOTE (Advisory Committee):**Hong-Guo Yu, Professor Directing Dissertation; Yanchang Wang, University Representative; Hank W. Bass, Committee Member; Brian P. Chadwick, Committee Member; Karen M. McGinnis, Committee Member.

**SUBJECT:**Biology

**SUBJECT:**Cytology

**DEGREE:**Doctoral

## Record number: 62

**FILENAME:**Fargason\_fsu\_0071E\_15374.pdf

**TITLE:**Love Song to the Demon-Possessed Pigs of Gadara

**AUTHOR:**Fargason, William H.

**MEMBER (professor directing dissertation):**Kimbrell, James, 1967-

**MEMBER (university representative):**Galeano, Juan Carlos, 1958-

**MEMBER (committee member):**Epstein, Andrew, 1969-

**MEMBER (committee member):**Hamby, Barbara, 1952-

**MEMBER (committee member):**Kirby, David, 1944-

**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 (92 pages)

**ABSTRACT:**In this manuscript, I explore issues of masculinity, mental illness, and spirituality—often using the form of elegy. Many of the elegies in this manuscript are in conversation with critic Jahan Ramazani’s arguments about elegies: “the modern elegist tends not to achieve but to resist consolation, not to override but to sustain anger, not to heal but to reopen the wounds of loss.” The arc of the book shows the speaker working through grief, healing from loss, and confronting mental illness. The poems of healing interrogate that “wound of loss” Ramazani describes, while detailing the inherent difficulty of opening or closing the wound. The book is structured in four sections, with each section having the central threads braided throughout. Each braid connects back to—and is filtered through—the speaker: his struggle with God, his constant conflicts with the father figure, his romantic relationships, and his own crumbling mental health. In addition to these recurring themes, I attempt to explore the distances between two people (or figures), in either a literal way, or through memory. In reckoning with those distances, the focus of exploration twists inward: the poems about other people become about the speaker. The knowledge gained from the focus inward becomes become holes in the speaker’s perceived identity that the poems must then work their way out of. Several of my poems are influenced by a strained relationship with an emotionally and physically abusive father. This father figure informs my speaker’s sense of masculinity through notions of power and love, which becomes mirrored in the speaker’s tenuous relationship toward God throughout the manuscript. In the poems that deal directly with family, I write in the tradition of such contemporary poets as Sharon Olds. However, many of the poems in this manuscript don’t glorify the body and the sensuous relationship a person can have with their body, as many of Olds’ poems do. Instead, many poems look at the way the body breaks down and is impacted through chronic illness, inherited conditions, aging, and ultimately, death. Many of the poems in this manuscript filter claustrophobic human experiences and interactions through the self, attempting to navigate new knowledge that fractures one’s understanding of the world. My speaker’s encounters with intimacy tend to reveal the erotic to be just as claustrophobic as the self. The poems dealing with intimacy are written in the tradition of such poets as Robert Creeley (with his unresolved desire of his idealized lover) and Richard Siken (with his attempts to revive and reanimate the dead lover in Crush). Several poems attempt to reconstruct memories and fail, thereby giving the reader the sense that the speaker is always already aware that memories—even traumatic or closely held memories—degrade over time. The end of the manuscript shows the speaker working toward recovery from his mental illness, but it doesn’t present that healing process in an unrealistic way, knowing that the healing process is never complete. Rather, the ending shows the speaker struggling to move forward, but moving forward nonetheless.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**July 9, 2019.

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

**NOTE (Advisory Committee):**James Kimbrell, Professor Directing Dissertation; Juan Carlos Galeano, University Representative; Andrew Epstein, Committee Member; Barbara Hamby, Committee Member; David Kirby, Committee Member.

**DEGREE:**Doctoral

## Record number: 63

**FILENAME:**Feng\_fsu\_0071E\_15304.pdf

**TITLE:**Essays on Sovereign Debt and Partial Default

**AUTHOR:**Feng, Shuang

**MEMBER (professor directing dissertation):**Atolia, Manoj

**MEMBER (university representative):**Kercheval, Alec N.

**MEMBER (committee member):**Dmitriev, Mikhail I., 1986-

**MEMBER (committee member):**Marquis, Milton H.

**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 (165 pages)

**ABSTRACT:**My dissertation involves the study of sovereign debt flows with an emphasis on the determinants and characteristics of sovereign default in emerging markets, accounting for the partial nature of this default. It consists of three chapters: Firstly, Chapter One and Chapter Two empirically explore the determinants of sovereign default. Secondly, Chapter Three quantitatively investigates the macroeconomic implications of the partial nature of sovereign default. In Chapter One and Chapter Two, I empirically examine the monetary and default responses of sovereign countries to the fluctuations in world commodity prices in a panel of 21 emerging countries with annual observations from 1970 to 2013, constructing and using a country-specific commodity price index with time-varying weights. The selection of the sample countries is based on both the definition of an emerging market by the International Monetary Fund (IMF) and the available information of the external public and publicly-guaranteed (PPG) debt arrears in the World Development Indicators (WDI) database. It is commonly known that emerging markets are vulnerable to global shocks, such as the shocks to world commodity prices. Large fluctuations in world commodity prices over the business cycles can greatly affect their foreign revenues, causing excessive external imbalances in international payments. Countries with external imbalance, especially with excessive current account deficits, are most likely to experience limited spending due to constraints on the inter-temporal substitution in expenditure and are likely to default on their external debt denominated in foreign currencies. I choose world commodity prices as the main predictor for the monetary and default responses to investigate, because for many of the countries in the sample, commodities are a large proportion of their export and foreign revenues. Large fluctuations in commodity prices, causing external imbalance, greatly affect their ability to service the external debt, which is typically denominated in foreign currencies. Chapter One, “World commodity prices, money, and foreign exchange in emerging markets: New evidence”, investigates countries’ monetary responses (the change of broad money and the choice of exchange rate regimes) when they are encountering the foreign revenue reduction caused by the fluctuations in world commodity prices, before making the decision to default. The estimated results show that the declines in world commodity prices significantly, positively affect the ratio of broad money to GDP and that countries tend to have more flexible exchange rate regimes when world commodity prices are depressed for an extended period. The investigation of the response of the broad money supply is consistent with the open economy trilemma and the estimates of the exchange rate regime flexibility fills the gap of the literature on the determinants of the choice of exchange rate regimes. By capturing the type of global shock as well as the time-varying country characteristics, the effect of the price index (excluding the country fixed effect) well explains the time-series variation and country-specific variation of the exchange rate regimes. Chapter Two, “World commodity prices and partial default in emerging markets: An empirical analysis”, mainly explores the effects of the fluctuation in world commodity prices on sovereign default. The results show that the decrease in the price index increases the default rate. The response of the default rate varies across countries and it generally increases with a country’s dependence on the commodity exports and external indebtedness. This chapter provides the first economically-significant, quantitative estimates of the effect of world commodity prices on the default rate. A few unique features of my approach allow me to make this contribution: The first feature is the price index. In this chapter, the details of developing the novel country-specific commodity price index are given. The price index is constructed with a two-stage aggregation using time-varying weights based on commodities exported and is used as the main explanatory variable. By accounting for the changes in export structure, the time-varying weights allow me to use data for a longer period, from 1970 to 2013, for my analysis, covering the emerging markets debt crisis, currency crisis, and the recent contraction. This country-specific nature of the price index helps control for other common, global shocks in the estimation. The second feature is that I focus on the realized default risk and use the partial default rate, other than default events, country spreads, or credit ratings, as the proxy for that risk. Along with the price index, the default rate provides longer-period data and allows me to do the analysis starting from 1970. In Chapter Three, “Sovereign debt: A quantitative comparative investigation of the partial default mechanism”, I build and quantitatively solve the partial default models of a small open economy, in both endowment and production environments, to investigate the responses of the borrowing, default, and pricing of sovereign debt to economic shocks and to examine how the partial default mechanism improves the predictions of the sovereign default models. The simulation results of the models can well predict the country spreads, default-related statistics, and other business cycle indicators. My models assume the non-exclusion from the international capital market after default. Thus, I can also examine the impulse responses of various macroeconomic variables to the shocks to better understand the underlying propagation mechanism of partial default. The un-realistic assumptions and the limited prediction performance of full default models are the two main reasons that motivate me to choose the partial default mechanism and to build the partial default models. Firstly, the standard theory of sovereign default assumes that countries always default on all of their debt and are excluded from the international capital market after default. However, the empirical regularities show that countries always default on only part of their debt and they continue to borrow while having debt arrears. Besides being inaccurate assumptions, the full default model has the limitations in terms of predicting some of the critical debt indicators, like the debt-to-output ratio and the default frequency, although it can predict that default happens in bad times and can predict counter-cyclical country spreads. The partial default models can improve the predictions of the debt level and the default frequency without losing the performance of matching other data moments. Moreover, it also can predict the partial default rate, which the full default model is not designed to and cannot predict. The partial default models in Chapter Three have three features: firstly, the partial default is endogenously-determined, which allows me to compute the default rate; secondly, there is a preemptive recovery payment of the default, which enables the price function of the short-term debt to have the feature that the price of the long-term debt has; and thirdly, there is no exclusion from the international capital market after default, so I can examine the impulse responses of various macroeconomic variables. Compared with the partial default model with endowment, the partial default model with production generates better predictions for the debt service and improves the over-predicted volatilities of consumption and interest spreads. Besides simultaneously matching the mean spread and the debt-to-output ratio, its simulated results can predict the pro-cyclical investment and closely match the relative volatility of investment.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**May 30, 2019.

**NOTE (Keywords):**Exchange rate regime, Monetary policy, Partial default, Sovereign debt, Sovereign default, World commodity prices

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

**NOTE (Advisory Committee):**Manoj Atolia, Professor Directing Dissertation; Alec N. Kercheval, University Representative; Mikhail Dmitriev, Committee Member; Milton H. Marquis, Committee Member.

**SUBJECT:**Economics

**DEGREE:**Doctoral

## Record number: 64

**FILENAME:**Frank\_fsu\_0071E\_15354.pdf

**TITLE:**Understanding the “Success” of an All Girls' Boarding School in Rural Tanzania: Perspectives of Graduates, Teachers, and Administrators

**AUTHOR:**Frank, Alison

**MEMBER (professor directing dissertation):**Khurshid, Ayesha

**MEMBER (university representative):**McDowell, Stephen D., 1958-

**MEMBER (committee member):**Akiba, Motoko

**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 (165 pages)

**ABSTRACT:**International aid agencies and policymakers over the last several decades have sought strategies and policies to support education for girls throughout the world. Despite significant interventions from world aid organizations, non-governmental agencies, and individual countries, more than half of children not attending school are girls. Girls’ transition rate from primary to secondary education has been especially alarming in sub-Saharan Africa: close to 50% of children do not matriculate from primary to secondary school in Africa. In some countries, the numbers have been even higher. As of 2013, less than 20% of Tanzanian children continued on to the secondary level of education (UNESCO, 2013). In this dissertation, I explored factors and processes at an all-girls’ boarding school in rural Tanzania that supported students’ high performance on national exams as well as high retention and graduation rates. Drawing upon in-depth interviews, this research illustrated how teachers, administrators, and graduates of this school defined, approached, and made sense of factors that made this particular girls’ education program a success.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**June 21, 2019.

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

**NOTE (Advisory Committee):**Ayesha Khurshid, Professor Directing Dissertation; Steve McDowell, University Representative; Motoko Akiba, Committee Member; Stephanie Zuilkowski, Committee Member.

**SUBJECT:**Education and state

**DEGREE:**Doctoral

## Record number: 65

**FILENAME:**FuentesKeuthan\_fsu\_0071N\_15166.pdf

**TITLE:**Searching for Irène Némirovsky: A Study of Némirovsky's Role in the Russian Diasporain Inter-Warparis

**AUTHOR:**Fuentes-Keuthan, Justin Robert

**MEMBER (professor directing thesis):**Wakamiya, Lisa Ryoko, 1969-

**MEMBER (committee member):**Efimov, Nina A.

**MEMBER (committee member):**Boutin, Aimée, 1970-

**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 (46 pages)

**ABSTRACT:**This paper analyzes the critical literature on Irène Némirovsky in the context of her engagement of the Inter-war émigré Russian community of Montparnasse, Paris as well as the broader French public. This paper begins with a detailed account of the Inter-war Russian community of Montparnasse, Paris to provide historical context and evaluate existing research on the Russian émigré community. A traditionally held notion that the community was closed off from outside influence and unified ideologically will be dispelled as part of an effort to illustrate how the setting in which Irène Némirovsky worked and lived facilitated her ability to write and qualifies her as an appropriate subject for study of Russian émigré literature. It also serves a crucial role in providing context when analyzing her more controversial works such as “David Golder”. Subsequently, an analysis of the scholarly work on Irène Némirovsky is conducted followed by an analysis of three of her most well-known novels. Study of these novels prove that Némirovsky was an atypical émigré in some ways but typical in others, but that above all, the community of Russian Montparnasse held a symbiotic relationship with its French host and a free exchange of literary ideas and cultures was available if it were sought after.

**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 8, 2019.

**NOTE (Keywords):**diaspora, emigre, interwar, Montparnasse, Nemirovsky, transnational

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

**NOTE (Advisory Committee):**Lisa Ryoko Wakamiya, Professor Directing Thesis; Nina Efimov, Committee Member; Aimee Boutin, Committee Member.

**SUBJECT:**Slavic countries

**SUBJECT:**Slavic literature

**DEGREE:**Masters

## Record number: 66

**FILENAME:**Fuzia\_fsu\_0071E\_15345.pdf

**TITLE:**The Sunyaev-Zel'Dovich Effect in Galaxy Clusters

**AUTHOR:**Fuzia, Brittany

**MEMBER (professor directing dissertation):**Huffenberger, Kevin M., 1977-

**MEMBER (university representative):**Zhao, Peixiang

**MEMBER (committee member):**Collins, David C. (David Christopher)

**MEMBER (committee member):**Murphy, Jeremiah Wayne

**MEMBER (committee member):**Prosper, Harrison B.

**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 (123 pages)

**ABSTRACT:**Galaxy clusters are the largest gravitationally bound structures in the Universe, and they provide valuable insights into astrophysics and cosmology. One method of studying galaxy clusters - the Sunyaev-Zel’dovich Effect - involves using the Cosmic Microwave Background (CMB) as a backlight. As CMB photons pass through the hot electron gas of the intracluster medium, a small portion are scattered and gain energy. This causes a distortion in the spectrum of the CMB which depends mainly on the total mass of the galaxy cluster and is independent of redshift, making it an important means of probing high-redshift systems. Only recently have telescopes become sensitive enough to detect the Sunyaev-Zel’dovich effect for low masses. In this thesis, we discuss the work done using the Sunyaev-Zel’dovich effect to study low-mass galaxy clusters and to identify new galaxy clusters in CMB maps.

**NOTE (Submitted Note):**A Dissertation submitted to the Department of Physics in partial fulfillment of the 2019.

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

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

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

**NOTE (Advisory Committee):**Kevin Huﬀenberger, Professor Directing Dissertation; Peixiang Zhao, University Representative; David Collins, Committee Member; Jeremiah Murphy, Committee Member; Harrison Prosper, Committee Member.

**SUBJECT:**Astrophysics

**DEGREE:**Doctoral

## Record number: 67

**FILENAME:**Gaboardi\_fsu\_0071E\_15307.pdf

**TITLE:**Populated Polygons to Networks: A Population-Centric Approach to Spatial Network Allocation

**AUTHOR:**Gaboardi, James D. (James David)

**MEMBER (professor directing dissertation):**Folch, David C.

**MEMBER (university representative):**Brusco, Michael J.

**MEMBER (committee member):**Horner, Mark W.

**MEMBER (committee member):**Uejio, Christopher K.

**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 (224 pages)

**ABSTRACT:**This dissertation establishes an original solution for allocating populations onto networks, which is demonstrated through empirical examples within the comprising census geographies of a single census tract and the comprising census geographies for an entire county. The novel method, populated polygons to networks (pp2n), is shown to perform as accurately as a current state-of-the-art method, while being less computationally complex. Benchmark datasets are utilized to represent household-level population distributions. Datasets generated from the methods of network allocation are applied to optimal facility location modeling scenarios. Networks are an underlying part of the human experience and, as such, attention must be given to their study in the spatial analysis of anthropocentric phenomena. However, transformations in spatial data must frequently be performed in order to allow for the integration of original disparate data formats. Such is often the case with spatial population data, which are generally available as polygons. As a means to build network-based models for analysis, certain methods have been developed for allocating populations onto networks for the purpose of calculating origin-to-destination cost (distance) matrices. Two of these methods include (1) simply snapping polygon centroids onto the nearest network segment and (2) dividing population values by area and proximity to the network. Here the new method, pp2n, is proposed that incorporates the strengths of both the existing methods, while mitigating their weaknesses. The traditional approach, the state-of-the-art approach, and the pp2n method are tested against a benchmark dataset representing population-weighted estimates for property parcels. It is shown that the pp2n method is less computationally complex in the worst-case scenario than the current state-of-the-art method and more representationally accurate that the traditional method. Further, in an empirical example within one census tract in Leon County, FL, the pp2n method is found to perform with comparable accuracy to the state-of-the-art approach when compared to both the traditional approach and the benchmark dataset. Also, it is shown that the algorithm for generating pp2n population weights runs in significantly less realtime. Extending the empirical example within a single census tract (and comprising geographies), another complete empirical example is performed on the full spatial extent of Leon County, Florida. Here the focus shifts from purely how the population data are being allocated to the network, to validating the spatial data utilized in modeling and understanding the inherent associated uncertainty. Permission to access a highly-restricted address data file, the Master Address File (MAF), was granted by the U.S. Census Bureau. Within this study, the MAF functions as an ultimate gold-standard benchmark to test all the methods used in this dissertation within the context of the 2010 Decennial Census. Disclosure and privacy are discussed and a critique is given for the method used to produce the population-weighted estimates for property parcels. It is then shown, as in the single census tract example, that the pp2n method performs as well as the state-of-the-art method, while doing so in substantially less runtime. Further, the property parcel dataset is validated as an acceptable surrogate for true housing units available from the MAF. Facility location modeling is utilized to determine the effects of the network allocation methods on optimal site selection. Following a review of mathematical programming and the uncertainty involved in spatial optimization, the network allocation methods are tested with four fundamental models within a spatial optimization framework: the location set covering problem, maximal covering location problem, p-median problem, and p-center problem. The linear integer programs are solved for each model, for each method at each spatial extent with 15 sets of parameters. In total, 780 models are solved to optimality. The results of the abstract population representation models are compared again to the population-weighted estimates for property parcels, which act as a surrogate for the benchmark truth of census microdata. Results show that the method of network allocation has a non-negligible effect on the solutions to facility location models. Specifically, optimal facility configurations of the location models are affected within the selected spatio-temporal study area: 2010 Leon County, FL.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**geocompuatation, GIS, spatial networks, spatial optimization

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

**NOTE (Advisory Committee):**David C. Folch, Professor Directing Dissertation; Michael J. Brusco, University Representative; Mark W. Horner, Committee Member; Chris K. Uejio, Committee Member.

**SUBJECT:**Geographic information systems

**SUBJECT:**Geodesy

**SUBJECT:**Geography

**SUBJECT:**Operations research

**DEGREE:**Doctoral

## Record number: 68

**FILENAME:**Gao\_fsu\_0071E\_15365.pdf

**TITLE:**Towards Terrain-Adaptive Feedback Control for Legged Locomotion via Understanding of Dynamic Interaction with Uncertain Rough Terrains

**AUTHOR:**Gao, Wei

**MEMBER (professor directing dissertation):**Clark, Jonathan E.

**MEMBER (university representative):**Roberts, Rodney G.

**MEMBER (committee member):**Oates, William

**MEMBER (committee member):**Hollis, Patrick J.

**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 (128 pages)

**ABSTRACT:**Legged locomotion is advantageous on difficult natural terrains due to it only requiring discrete ground contacts. Biological systems with limbs have developed multiple levels of control to afford such fast and robust legged locomotion. Similarly, bio-inspired controls on legged robots can also be divided into equivalent levels. The high-level controllers, including the brain and the reflex level controllers, process the environmental information and communicate with muscles that are denoted as low-level controllers, or the preflex level controllers. The low-level controllers then directly contribute to dynamics of the legs. Currently, various low-level controllers have been developed and shown to have the capability of overcoming rough but certain terrains, i.e. terrains with height variation but are infinitely hard. However, uncertain rough terrains universally exist in the natural world. To traverse such terrains, the high-level controllers need to estimate terrain characteristics and adjust the low-level controllers to accommodate the terrain changes as the robots are operating. This dissertation provides the necessary techniques to create a feedback control routine to accomplish such high-level tasks and achieve terrain-adaptive legged locomotion. It starts from studying the effect of leg stiffness and damping on locomotion performance, which necessitates careful leg design for successful legged locomotion and advanced low-level leg controllers for improved performance. The direct collocation method is then introduced to optimize spring modulation trajectories as an advanced leg controller. However, the power of the optimization results cannot be sufficiently exploited unless terrain characteristics are known beforehand. As a result, the Maximum Entropy method is developed to estimate terrain characteristics using data from sensors onboard. This method allows fusion of data from heterogeneous sources to obtain objective uncertainty quantification of terrain characteristics. With the statistical information about terrain characteristics from the Maximum Entropy method, the routine can finally update the low-level leg controller such that the robots can survive traversing uncertain rough terrains.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**July 9, 2019.

**NOTE (Keywords):**legged locomotion, legged robots, spring modulation, terrain adaptive, uncertainty quantification, viscoelastic legs

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

**NOTE (Advisory Committee):**Jonathan E. Clark, Professor Directing Dissertation; Rodney G. Roberts, University Representative; William S. Oates, Committee Member; Patrick J. Hollis, Committee Member.

**SUBJECT:**Mechanical engineering

**DEGREE:**Doctoral

## Record number: 69

**FILENAME:**Garris\_fsu\_0071E\_15391.pdf

**TITLE:**A Content Analysis of Parental Outreach and Assistance within English Language Learner Plans by School Districts in Florida

**AUTHOR:**Garris, Carol Y. (Carol Yanira)

**MEMBER (professor directing dissertation):**Rutledge, Stacey A.

**MEMBER (university representative):**Lewis, Sandra

**MEMBER (committee member):**Park, Toby J.

**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 (220 pages)

**ABSTRACT:**Over the last several decades, Florida has been a destination for immigrants from ¬¬around the world, many for whom English is not their first language. In 1990, diverse groups of community leaders and activists came together to file a lawsuit against the Florida Department of Education (FLDOE) to address the need of programs for English language learner (ELL) students. As a result of the lawsuit, Florida’s Multicultural Education Training and Advocacy (META) Consent Decree provided a framework for compliance with federal and state laws and jurisprudence, mandating all districts to ensure ELL students are provided with equal access to programming appropriate to their level of English proficiency, academic achievement, and special needs. In this dissertation, I used a content analysis to systematically investigate the contents of District ELL Plans from all 67 school districts in Florida related to their reports regarding their engagement in communication and outreach to ELL parents, the functions and composition of PLCs and to understand, using Epstein’s Parent Involvement Framework, the nature of services to parents. The study focused on the following two sections of the META Consent Decree: Section 8 (Parent, Guardian, Student Notification and Rights), and Section 9 (The Parent Leadership Council). In my analysis of Section 8, I found that districts relied mostly on translated school-to-home communication documents and bilingual professionals to communicate with ELL parents. Also, the data showed that districts collaborated with various community stakeholders to expand ELL parent and student services. As for Section 9, I found that 37% of 67 PLCs (n=25) across the state only used PLCs to develop, revise and approve the District ELL Plan while 36% of districts used PLCs to provide ELL parents with an opportunity to have a voice and share their concerns and needs. In general, 69% of districts implemented their PLCs only at the local education agency level, rather than at the school level. Lastly, 100% of the districts reported at least one sample practice for Epstein et al.’s (2018) Parent Involvement Framework’s through parenting, communicating, volunteering, and decision-making. In contrast, 49% of districts did not report a practice for the involvement of families through learning at home and 34% of districts did not report a practice deriving from the involvement collaborating with the community.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**District ELL Plans, English Language Learner, English to Speakers of Other Languages, Florida META Consent Decree, Parent Leadership Council, Parent Outreach and Communication

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

**NOTE (Advisory Committee):**Stacey Rutledge, Professor Directing Dissertation; Sandra Lewis, University Representative; Toby Park-Gaghan, Committee Member; Carolyn Herrington, Committee Member.

**SUBJECT:**Educational leadership

**SUBJECT:**School management and organization

**DEGREE:**Doctoral

## Record number: 70

**FILENAME:**Gates\_fsu\_0071E\_15169.pdf

**TITLE:**Bickering Brass: Interservice Rivalry, Defense Unification, and the Pacific War

**AUTHOR:**Gates, Allyson

**MEMBER (professor directing dissertation):**Piehler, G. Kurt

**MEMBER (university representative):**Souva, Mark A.

**MEMBER (committee member):**Culver, Annika A., 1975-

**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, 2019

**PHYSICAL DESCRIPTION:**1 online resource (291 pages)

**ABSTRACT:**Interservice rivalry between the United States’ military services during the Second World War often proved problematic. Although the Americans and their allies emerged victorious from the conflict, they did so in part due to the even worse rivalries between the military services of the German and Japanese armies. These problems that came to a head during the war had a lasting effect on the military structure that continues to be felt to this day. The present structure of the American military is the result of decades of efforts to unify the services, which culminated with the 1986 Goldwater-Nichols Act. However, whereas most studies of the subject place the Cold War as the central, defining factor of the unification of the defense structure, my work argues that it was not tensions between the United States and the Soviet Union that created the foundations of the semi-joint American national security state, but instead the lessons of the Second World War. The conflicts between the Army and the Navy in the Pacific Theater provided the impetus for efforts to unify the services. Those same conflicts also led to a much less unified result than had originally been hoped for by the proponents of unification, which is, in part, the reason the unification process lasted so long after the passage of the National Security Act.

**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):**April 22, 2019.

**NOTE (Keywords):**American military, defense, Interservice rivalry, national security, Pacific War, World War II

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

**NOTE (Advisory Committee):**G. Kurt Piehler, Professor Directing Dissertation; Mark Souva, University Representative; Annika Culver, Committee Member; Michael Creswell, Committee Member.

**SUBJECT:**United States--History

**SUBJECT:**Military education

**DEGREE:**Doctoral

## Record number: 71

**FILENAME:**Gonsoroski\_fsu\_0071N\_15431.pdf

**TITLE:**Evaluating the Relationship between Indoor Heat Exposure and Emergency Calls in New York City, Ny during Summer 2016

**AUTHOR:**Gonsoroski, Elaina

**MEMBER (professor directing thesis):**Uejio, Christopher K.

**MEMBER (committee member):**Elsner, James B.

**MEMBER (committee member):**Folch, David C.

**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 (57 pages)

**ABSTRACT:**Heat-related mortality rates increase significantly during heat waves, in some instances even more than doubling. Climate change projections indicate that the frequency and intensity of these extreme heat events may increase. Well-known events such as the Chicago 1995 and European 2003 heat wave led to a thorough investigation of the social and environmental risk factors that resulted in large numbers of excess mortality. However, most studies have focused on outdoor conditions while few published studies have attempted to investigate the relationship between heat waves, indoor environments and human health. Understanding the role of indoor environments may prove critical to reducing heat-related illness, especially in countries such as the U.S. where a large proportion of the population spends most of their time indoors. The goal of this study is to investigate this relationship and inform future public health studies and interventions. Data from the summer of 2016 were compiled for New York City, New York, U.S. in order to conduct a case-control study with specific interest in heat-related morbidity. Paramedics carried sensors which recorded indoor temperature and relative humidity observations while responding to emergency calls. Indoor conditions were related to Patient Care Reports containing medical and demographic information of the 911 calls provided by the New York City Emergency Medical Services. Additional analyses focused on outdoor weather conditions and their effect on indoor conditions using weather data provided by the National Oceanic and Atmospheric Administration National Center for Environmental Information. These data were then compared to the data collected indoors to quantify the relationship that exists between outdoor and indoor conditions. The study provides insight into two research questions: 1) do outdoor conditions relate to indoor conditions, and 2) do indoor temperature and humidity relate to the composition of emergency calls. Results from the study show a linear relationship between outdoor and indoor temperature and specific humidity. In addition, the case-control study results suggest an increased risk of heat-related illness associated with temperatures equal to or greater than 28℃.

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

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

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

**NOTE (Keywords):**Case-control study, Emergency medical services, Extreme heat, Heat wave, Indoor, Temperature

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

**NOTE (Advisory Committee):**Christopher K. Uejio, Professor Directing Thesis; James B. Elsner, Committee Member; David C. Folch, Committee Member.

**SUBJECT:**Geography

**SUBJECT:**Environmental health

**DEGREE:**Masters

## Record number: 72

**FILENAME:**Gortsema\_fsu\_0071N\_15226.pdf

**TITLE:**Using App-Based Organizational Strategies to Promote Neurodiverse and Typical Students' Success

**AUTHOR:**Gortsema, Jessica

**MEMBER (professor directing thesis):**Cripe, Juliann J. Woods, 1952-

**MEMBER (committee member):**Therrien, Michelle

**MEMBER (committee member):**Hinnant, Lynne

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College Ofcommunication and Information

**CORPORATE NAME:**School of Communication Science and Disorders

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

**PHYSICAL DESCRIPTION:**1 online resource (75 pages)

**ABSTRACT:**The purpose of this study was to evaluate the perceptions of both neurodiverse and typical college students on organizational applications targeting support of executive functioning and overall college success. The study utilized a mixed method, exploratory design, collecting both qualitative and quantitative data through online surveys and web interviews. Student perceptions of organizational apps and individualized consultative services were measured, as well as frequency of use and types of apps chosen. Results showed that student participants significantly increased how frequently they used organizational apps. Students participants reported that they would utilize such services again and would refer other students to the services. Aspects that were liked best about the services and suggestions for improvement were collected. These results can be used to shape future services for neurotypical and neurodiverse college students as well as in research to further develop evidence-based supports.

**NOTE (Submitted Note):**A Thesis submitted to the School of Communication Science and Disorders in partial fulfillment of the requirements for the degree of Master of Science.

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

**NOTE (Date of Defense):**April 24, 2019.

**NOTE (Keywords):**Apps, College, Neurodiversity, Supports

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

**NOTE (Advisory Committee):**Juliann Woods, Professor Directing Thesis; Michelle Therrien, Committee Member; Michael Meth, Committee Member; Lynne Hinnant, Committee Member.

**SUBJECT:**Speech therapy

**DEGREE:**Masters

## Record number: 73

**FILENAME:**Griffis\_fsu\_0071E\_15299.pdf

**TITLE:**Democratic Blind Spots: Organized Labor and the Persistence of Subnational Authoritarianism in Mexico

**AUTHOR:**Griffis, John Garland

**MEMBER (professor directing dissertation):**Reenock, Christopher

**MEMBER (university representative):**Frank, Andrew, 1970-

**MEMBER (committee member):**Driscoll, Amanda M.

**MEMBER (committee member):**Kern, Holger Lutz

**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 (168 pages)

**ABSTRACT:**Newly transitioned democracies frequently exhibit authoritarian traits at the subnational level. The literature on subnational authoritarianism tends to focus on how these enclaves interact with national governments, ignoring how they maintain support in their own regions. This dissertation seeks to explain authoritarian persistence in the case of Mexico. I propose subnational autocrats maintain their local coalitions from the previous autocratic regime. Where they are able to successfully maintain these coalitions through economic and political shocks they can persist indefinitely into a nationally democratic regime. My empirical analysis looks specifically at Mexico, where organized labor remained an important supporter of the Institutional Revolutionary Party well after the democratic transition. I use data on organized labor mobilization, PRI electoral support, and social spending to see if there is an electoral and social spending connection between organized labor and the PRI. I find no clear evidence that labor served as a critical player in local electionsfor the PRI.

**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):**Summer Semester 2019.

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

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

**NOTE (Advisory Committee):**Chris Reenock, Professor Directing Dissertation; Andrew Frank, University Representative; Amanda Driscoll, Committee Member; Holger Kern, Committee Member.

**SUBJECT:**Political science

**DEGREE:**Doctoral

## Record number: 74

**FILENAME:**Groenen\_fsu\_0071E\_15282.pdf

**TITLE:**Diagnosing the Atmospheric Phenomena Associated with the Onset and Demise of the Rainy Season in Mesoamerica

**AUTHOR:**Groenen, Danielle Elizabeth

**MEMBER (professor directing dissertation):**Bourassa, Mark Allan

**MEMBER (university representative):**Elsner, James B.

**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 (142 pages)

**ABSTRACT:**Mexico and Central America (Mesoamerica) are situated in a complex and unique geographical position with the Caribbean Sea to the East and the tropical Eastern Pacific Ocean to the West. The weather patterns of this region are driven by winds, temperatures, moisture, and orography of several mountain ranges. This study finds the dates of the onset and demise of rainfall regimes on a specific day using NASA’s Tropical Rainfall Measuring Mission (TRMM) rainfall for years 1998-2012, area-averaged over land. Using NASA’s MERRA-2 Reanalysis data, we also look at the phenomenology of the triggers of the rainy season onset and demise on the daily time-scale instead of the monthly scales used by previous studies. We find that the Mesoamerican Rainy Season can be distinguished into two parts: the Early Spring Rainfall (ESR) associated with light rains and the Late Spring Rainfall (LSR) associated with heavy rains. Two algorithms are used to obtain these rainy season distinctions. A new algorithm was developed during this study, called the SLOPE algorithm, to calculate when the rain rates first start to increase. In the second method, the daily cumulative anomalies of rainfall are compared to the climatological rainfall to find the time of onset of the heavy rains, called the MINCA algorithm. To better understand the phenomenology associated with the timing of the rainfall, we look at the monsoon trough, moisture flux convergence, moist static energy anomalies, and the weakening/strengthening of the winds associated with the Caribbean Low-Level Jet and Panama Jet. The light rain rates begin, on average, in mid-March, approximately one month after the peak of the winter Caribbean Low-Level Jet and the Panama Jet. The ramp-up between the light rains and heavy rains is associated with a significant weakening of both jets and the northward progression of a monsoon trough off the western coast of Central America. The heavy rain rates begin, on average, in mid-May, and are associated with the timing when the Panama Jet goes to near zero magnitude and a strong monsoon trough in the eastern Pacific. At the demise of the rainfall, approximately in mid-November, the Panama Jet strengthens again, the total moisture flux convergence decreases significantly, and the monsoon trough retreats southward and eastward. The results of this study have positive implications in agriculture and water resources for Mesoamerica, as this information may help resource managers better plan and adapt to climate variability.

**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 28, 2019.

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

**NOTE (Advisory Committee):**Mark A. Bourassa, Professor Directing Dissertation; James Elsner, University Representative; Robert E. Hart, Committee Member; Philip Sura, Committee Member.

**SUBJECT:**Meteorology

**DEGREE:**Doctoral

## Record number: 75

**FILENAME:**Gumber\_fsu\_0071E\_15267.pdf

**TITLE:**Identification and Characterization of Linker of Nucleoskeleton and Cytoskeleton (Linc) Complex Components in Maize (Zea mays L.) Meiosis and Development

**AUTHOR:**Gumber, Hardeep Kaur

**MEMBER (professor directing dissertation):**Bass, Hank W.

**MEMBER (university representative):**Gunjan, Akash

**MEMBER (committee member):**McGinnis, Karen M.

**MEMBER (committee member):**Yu, Hong-Guo

**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 (123 pages)

**ABSTRACT:**The LINC (Linker of Nucleoskeleton to Cytoskeleton) complex is an essential multi-protein structure spanning the nuclear envelope in all eukaryotic organisms. The core of the LINC complex is comprised of SUN (Sad1/Unc-84) domain proteins in the inner nuclear membrane, physically interacting in the periplasmic space, with the KASH (Klarsicht/ANC-1/Syne homology) domain proteins of the outer nuclear membrane. The N-terminus of SUN domain proteins interact with chromatin and lamin or lamin-like proteins at the nuclear periphery, whereas, the N-terminus of KASH domain proteins interact with the cytoskeletal components in the cytoplasm, making a bridge across the nuclear envelope. LINC complex is essential for maintaining the shape and size of the nucleus; nuclear migration; and chromosome movements during meiosis. Despite of being an essential component of the cell, the knowledge of LINC complex is limited in plants, especially in monocots which include grasses, the most important agronomic crops. To fill this knowledge gap, using bioinformatic and biochemical approaches, we identified 17 new maize candidate genes coding for core LINC or associated proteins. These include 10 Maize LINC KASH (MLK) proteins, 3 inner nuclear membrane Nuclear envelope Associated Proteins (NEAP), 2 lamin functional homologs NMCP/CRWN homolog (NCH) proteins and 2 NCH-interacting KAKU proteins. Several of these candidates have been verified for their nuclear envelope localization and SUN-interaction by FRAP and co-immunoprecipitation assays in heterologous expression system. In previous studies from our lab, 5 SUN proteins were identified in maize and SUN2 was characterized for its meiotic functions in tethering telomeres to the nuclear envelope, while the KASH protein remained unknown. In second part of the dissertation, I have reported the functional characterization of Maize LINC KASH AtSINE-like2, MLKS2, which encodes a SINE-group KASH protein with characteristic armadillo repeats (ARM) at its N-terminus. Genetic analysis of transposon-insertion mutations, mlks2-1 and mlks2-2, showed defects in multiple aspects of meiosis. 3D cytology of mutant meiocytes show defects in nuclear positioning, bouquet formation and aneuploidy resulting in inviable grains. The mutants show defects in perinuclear actin accumulation. An ARM-dependent MLKS2-actin co-localization was observed in heterologous expression system. Together, these studies support a working model in which the nucleus is connected to F-actin cytoskeleton through a possible VELCRO-type mechanism provided by the MLKS2 ARM-domain on the nuclear surface. This places MLKS2 in the meiotic chromosome segregation pathway, likely mediated by a chain connecting chromosomes to actin through SUN-MLKS2 LINC complex.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**KASH, LINC, Maize, Meiosis, SUN

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

**NOTE (Advisory Committee):**Hank W. Bass, Professor Directing Dissertation; Akash Gunjan, University Representative; George W. Bates, Committee Member; Karen M. McGinnis, Committee Member; Hong-Guo Yu, Committee Member.

**SUBJECT:**Molecular biology

**SUBJECT:**Cytology

**DEGREE:**Doctoral

## Record number: 76

**FILENAME:**Hamilton\_fsu\_0071E\_15429.pdf

**TITLE:**How Adolescent African American Females Make Sense of Stem Learning

**AUTHOR:**Hamilton, Jennifer L. (Jennifer Leigh)

**MEMBER (professor directing dissertation):**Jakubowski, Elizabeth M.

**MEMBER (university representative):**Iatarola, Patrice

**MEMBER (committee member):**Davis, Angela F.

**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 (147 pages)

**ABSTRACT:**Despite increasing attention given to STEM education in the United States, little focus is given on how adolescent African American females make sense of STEM education in a middle grades’ context. Framed within the situated cognition theory, this study explores how young Black females make sense of STEM learning through engaging with structured STEM-based activities while participating in one of two different middle grades classroom settings. Furthermore, data from one-on-one interviews, task observations, and a focus group discussion were triangulated to show how the participants made sense of their learning. As a result of this study, participants’ sensemaking of STEM emerged in three unique cases and was identified in light of how they defined the acronym STEM, how they verbalized and demonstrated the practices used by scientists and engineers, and the types of academic resiliency they either referred to or displayed throughout the process.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**African American Females, Perceptions of STEM, STEM Education

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

**NOTE (Advisory Committee):**Elizabeth Jakubowski, Professor Directing Dissertation; Patrice Iatarola, University Representative; Angela Davis, Committee Member; Jane Lo, Committee Member.

**SUBJECT:**Education

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

**SUBJECT:**Middle school education

**DEGREE:**Doctoral

## Record number: 77

**FILENAME:**Han\_fsu\_0071E\_15242.pdf

**TITLE:**Essays on the Disposition Effect and Asset Prices

**AUTHOR:**Han, Hope Hyeun

**MEMBER (professor directing dissertation):**Autore, Donald M.

**MEMBER (university representative):**Zuehlke, Thomas W. (Thomas William), 1957-

**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 (87 pages)

**ABSTRACT:**This dissertation is comprised of two essays that focus on the role of disposition effect to market reactions in seasoned equity offerings and the importance of considering the dynamics of reference price in disposition effect. The first essay investigates the association between the disposition effect and the stock price reaction to announcements of seasoned equity offers (SEOs). I find that SEO issuing firms in which investors have greater unrealized capital gains exhibit a more severe SEO announcement reaction. This result is consistent with the well-known disposition effect, whereby investors tend to sell stocks in which they have unrealized capital gains and hold stocks with unrealized losses. I also find supporting evidence that investors’ behavioral biases contribute more to SEO announcement reactions for firms with lower institutional ownership. The results suggest that the disposition effect can influence SEO announcement reactions. In the second essay I study the disposition effect using highest price as a reference point. Recent literature shows that investors’ selling propensity is V-shaped with respect to unrealized profits, challenging the predicted monotonic relationship. I find that such monotonic relationship exists between the selling propensity and the perceived return when gains and losses are measured relative to a new reference point: the highest price experienced by the investor since purchase. I find consistent evidence when using the highest price in the past 52 weeks as a reference point. Further evidence shows that stocks with higher perceived returns subsequently underperform. Overall, my findings suggest that accounting for the dynamics of the reference point in measuring perceived trading profits is crucial for understanding the disposition effect, and that the highest-price-based disposition effect may be driven by informed trading.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**disposition effect, reference point, Seasoned Equity Offers, unrealized capital gains

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

**NOTE (Advisory Committee):**Don M. Autore, Professor Directing Dissertation; Thomas Zuehlke, University Representative; Danling Jiang, Committee Member; Baixiao Liu, Committee Member; Lin Sun, Committee Member.

**SUBJECT:**Finance

**SUBJECT:**Animal behavior

**DEGREE:**Doctoral

## Record number: 78

**FILENAME:**Hanson\_fsu\_0071N\_15322.pdf

**TITLE:**The Perception of the Interdental Fricative in Second Language Spanish

**AUTHOR:**Hanson, Stacey

**MEMBER (committee member):**Leeser, Michael J.

**MEMBER (committee member):**Reglero, Lara

**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 (156 pages)

**ABSTRACT:**The interdental fricative /θ/, present in North-Central Spain, has proven to be difficult for second language learners to acquire, even after time spent abroad in Spain (Geeslin& Gudmestad, 2008; Knouse, 2012). Explicit pronunciation training helps to improve learners’ pronunciation of the L2 (Ausín & Sutton, 2010; González-Bueno & Quintana-Lara, 2011), as does increased exposure to dialectal variation (Schmidt, 2018). Previous research, however, has only focused on the production of the interdental fricative /θ/. Contradictory evidence related to the order in which sounds are perceived versus produced, calls for further investigation of the link between perception and production (Nagle, 2017; Chan, 2011). The current study investigates the perception of the Spanish /θ/, and the impact of explicit training, proficiency level, and instructor dialect on its acquisition. One discrimination and three identification tasks were designed to examine learners’ perception of the fricative /θ/. Learners were tasked with identifying two stimuli as sounding the same or different, listening to stimuli and writing down what they heard, identifying words as native or not native to Spain, and listening to a list of words and choosing the correct response from a provided list. Consistent with previous studies, it was hypothesized that more advanced learners would better perceive the fricative /θ/ than beginners (H1), that learners who received explicit training would better perceive the fricative /θ/ than learners without explicit training (H2), and that learners with an instructor speaking a Peninsular accent would better perceive the fricative /θ/ than learners with instructors from other dialectal areas (H3). A total of 102 L2 participants were recruited from beginner, low-intermediate, intermediate, and advanced Spanish courses; approximately half received explicit training on the use of the /θ/ in Spanish. Half of the participants also had an instructor with a Peninsular accent. xiv In addition, 5 native Spanish speakers also participated in the study to provide a baseline. The study used a pretest, posttest design and repeated measures ANOVAs; significance was set at p≤.05.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Explicit Training, Fricatives, Phonology, Second Language Acquisition

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

**NOTE (Advisory Committee):**Carolina González, Professor Directing Thesis; Michael Leeser, Committee Member; Lara Reglero, Committee Member.

**SUBJECT:**Languages, Modern

**SUBJECT:**Linguistics

**DEGREE:**Masters

## Record number: 79

**FILENAME:**Harris\_fsu\_0071E\_15373.pdf

**TITLE:**Making a Way out of No Way: Black Progress & the Ame Church in Early County, Georgia to 1918

**AUTHOR:**Harris, Kyle Quinton

**MEMBER (professor directing dissertation):**Jones, Maxine Deloris

**MEMBER (university representative):**Montgomery, Maxine Lavon, 1959-

**MEMBER (committee member):**Mooney, Katherine Carmines

**MEMBER (committee member):**Piehler, G. Kurt

**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 (188 pages)

**ABSTRACT:**Utilizing the historical and cultural frameworks of Stephen Hahn and bell hooks and their scholarly predecessors and contemporaries, this study focuses on the African Methodist Episcopal (AME) Church in Early County, Georgia, as a counter-hegemonic rural space for refuge, resistance, ingenuity and community-building, paying close attention to the activities at county seat, Blakely, which rippled through Early County. Chapter 1 of this study will examine the historical presence and significance of Blacks in Early County and their encounters with Methodism. The writer builds the argument that Africans in Early County always exercised varying degrees of ingenuity and autonomy, even under the yoke of slavery. As a consequence of the 13th and 14th Amendments, Blacks in the county were legally placed in a new space wherein they could make permanent inroads and influence AND develop this society. Utilizing the official media organ of the AME Church, The Christian Recorder and correspondence from AME Bishops, Elders, and laity, the writer shows how the national thrust of the AME church influenced the work of freedom and progress at the local level, evidenced through the accomplishments and collaborative efforts of AMEs and community leaders in Early County. In order for freedom and democracy to expand and be firmly rooted in a community, education must be at its core. Chapter 2 examines the AME Church’s role in the field of education in Georgia, paying particular attention to African Methodist educational work in Early County and its influences across the state. Using the framework of Hooks, the establishment of the AME Church --- its educational and political arm created new “worlds” for Blacks in Early County. Moreover, it provided a “safe space” for the building of community. Chapter 3 will examine the political role of the AME Church in Early County, Georgia, highlighting how the firmly-bound ties of the connectional AME church, worked to undermine White Supremacy in Blakely, focusing on the leaders of this political movement and their religious background and influence. Efforts at Black progress, freedom and autonomy in Early County were not met with open arms from the county’s White citizens, at times it was met with violent retaliatory measures. Chapter 4 will examine violence in the county, analyzing two instances of overt race violence, where AME Churches and congregants, among others, were targeted. It will also examine the AME Church’s national stance on race violence, highlighting the viewpoint of leaders at the national and local levels and how they mitigated polarized race relations at the county seat. Overall, this study seeks to add to the historical scholarship of the AME Church’s role in Black progress in America. In hooks’ “Choosing the Margin As A Space of Radical Openness” she emphasizes a significant line from the South African Freedom Charter which states, “Our struggle is also a struggle of memory against forgetting” in her discussion on radical politics in the perceived Black peripheral space. It is hoped that this work will highlight the efforts of the AME church and Black people in Early County who embraced a radical and transformative movement of forward progress, outside of the scope of White Supremacy. In addition to this study creating an accurate historical record for the halls of academia, this work also encourages readers to remember, identify, examine, enhance and reimage the historical tenets of Black political progress and implement them to galvanize civic participation, societal justice and inclusive education in the rural South.

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

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

**NOTE (Date of Defense):**June 21, 2019.

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

**NOTE (Advisory Committee):**Maxine D. Jones, Professor Directing Dissertation; Maxine Montgomery, University Representative; Katherine Mooney, Committee Member; G. Kurt Piehler, Committee Member.

**SUBJECT:**African Americans--History

**SUBJECT:**United States--History

**SUBJECT:**African Americans--Study and teaching

**DEGREE:**Doctoral

## Record number: 80

**FILENAME:**Hart\_fsu\_0071N\_15451.pdf

**TITLE:**Amateurism, Player Compensation, and College Sports an Analysis of the Perceived Effects of a Free Market Model on the National Collegiate Athletic Association and Three Stakeholders of Division I Athletics

**AUTHOR:**Hart, Steven

**MEMBER (professor directing thesis):**Kim, Amy C. H. (Amy Chan Hyung)

**MEMBER (committee member):**James, Jeffrey D. (Jeffrey Dalton)

**MEMBER (committee member):**Xue, Hanhan

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Education

**CORPORATE NAME:**Department of Sport Management

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

**PHYSICAL DESCRIPTION:**1 online resource (205 pages)

**ABSTRACT:**The debate about student-athlete compensation in college athletics has received increased media attention in the past decade. As many parties continue to call for the National Collegiate Athletic Association (the NCAA) to reform its organizational model and rulebook, commentators have proposed several alternatives to the current amateurism model. Among the most commonly discussed is a free market model. This model, arguably, would have the most significant impact on the NCAA and its stakeholders. Critics and proponents of such a model disagree as to what the impacts would be on the NCAA and its ability to achieve its organizational purposes, including governing the fairness of competition and establishing rules defining the amateur status of student-athletes (Beggs et. al., 2004). The purpose of this study was to investigate managers and stakeholder groups’ perceptions of a free market system on the organizational structure and the ability of the NCAA to achieve its organizational goals, and the impact on three key stakeholders: Division I athletic departments, Division I student-athletes, and sports law attorneys. Since much of the current discussion about the future of the NCAA is proffered by industry commentators, celebrities, and sports writers, there is a need to identify and gain perspective from key stakeholders who would directly affect and be affected by a change to the current student-athlete compensation model. Stakeholder theory was used as a framework for substantiating the importance of key stakeholders in college athletics. Stakeholder theory helps an organization explore the interests, expectations and perspectives of those who affect and are affected by its actions insomuch a decision maker can accordingly develop appropriate strategies and policies for responding to both internal and external influences (Hester, Bradley, & Adams, 2012). The three stakeholder groups chosen for this study included division I intercollegiate athletic administrators, division I student-athletes, and sports law attorneys. These stakeholder groups were selected because of their potential to be impacted by the implementation of a free market model. By way of understanding the importance of the three key stakeholders, this thesis focuses on exploring their perception of: 1) what a free market model is for intercollegiate athletics, and 2) how such a free market model would potentially impact the development of the NCAA and stakeholders themselves. To facilitate the study, semi-structured interviews with eight participants were conducted. The participants included two members from each of the above-mentioned stakeholder groups (i.e. two division I student-athletes, two sports law attorneys and two division I athletic administrators) as well as two NCAA committee members. Those participants were chosen through a process of purposive sampling created through a set of specific criteria (e.g. only student athletes who played football or basketball were selected to participate). Semi-structured interview questions were developed based on the research questions listed in this study. All interviews were recorded and participants’ answers were transcribed. The transcribed interviews were reviewed and key words and themes emerging from the interviews were identified. The data was then analyzed using conventional qualitative content analysis. Results of the study revealed that stakeholders of the NCAA have varying ideas of what a free market model is for intercollegiate athletics. Both NCAA committee members described a free market for intercollegiate athletics as a pay-for-play model. The attorneys’ perceptions were related to a traditional economic definition of a free market. Other ideas were similar to a professional model where salary caps are negotiated through a process of collective bargaining. A key finding from this study is that there are differences in stakeholder perceptions of how a free market model would potentially impact the development of the NCAA and stakeholders. Many of the perceptions identified amongst all or most of the stakeholders interviewed are uncommon in the media narratives about the future of the NCAA. Future implications of the findings on stakeholder theory were discussed.

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

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

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

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

**NOTE (Advisory Committee):**Amy Kim, Professor Directing Thesis; Jeffrey James, Committee Member; Hanhan Xue, Committee Member.

**SUBJECT:**Sports administration

**DEGREE:**Masters

## Record number: 81

**FILENAME:**Hasan\_fsu\_0071E\_15378.pdf

**TITLE:**A Multi-Criteria Decision Support System for pH.D. Supervisor Selection: A Hybrid Approach

**AUTHOR:**Hasan, Mir Anamul

**MEMBER (professor directing dissertation):**Schwartz, Daniel G.

**MEMBER (university representative):**Meyer-Bäse, Anke

**MEMBER (committee member):**Haiduc, Sonia

**MEMBER (committee member):**Wang, An-I Andy

**MEMBER (committee member):**Whalley, David B.

**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 (119 pages)

**ABSTRACT:**Selection of a suitable Ph.D. supervisor is a very important step in a student's career. This dissertation presents a multi-criteria decision support system to assist students in making this choice. The system employs a hybrid method that first utilizes a fuzzy analytic hierarchy process to extract the relative importance of the identified criteria and sub-criteria to consider when selecting a supervisor. Then, it applies an information retrieval-based similarity algorithm (TF/IDF or Okapi BM25) to retrieve relevant candidate supervisor profiles based on the student's research interest. The selected profiles are then re-ranked based on other relevant factors chosen by the user, such as publication record, research grant record, and collaboration record. The ranking method evaluates the potential supervisors objectively based on various metrics that are defined in terms of detailed domain-specific knowledge, automating part of the decision making process. In contrast with other existing works, this system does not require the professor's involvement and no subjective measures are employed.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Academic Search, Expert Recommendation, Fuzzy AHP, MCDM, Ph.D. Supervisor Selection

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

**NOTE (Advisory Committee):**Daniel Schwartz, Professor Directing Dissertation; Anke Meyer-Baese, University Representative; Sonia Haiduc, Committee Member; An-I Wang, Committee Member; David Whalley, Committee Member.

**SUBJECT:**Computer science

**DEGREE:**Doctoral

## Record number: 82

**FILENAME:**Hernandez\_fsu\_0071E\_15183.pdf

**TITLE:**Embodied Scholar-Activism: Testimonios from Chicana Doctoral Students

**AUTHOR:**Hernandez, Esteebaliz

**MEMBER (professor directing dissertation):**Jones, Tamara Bertrand

**MEMBER (university representative):**Dennen, Vanessa P., 1970-

**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 (185 pages)

**ABSTRACT:**Understanding the experiences of Chicanas in doctoral study remains salient because of pervasive doctoral program attrition rates and severe underrepresentation in the professoriate. Chicanas doctoral students engage in these unfamiliar and isolating academic environments with few Chicana faculty or peer mentors to help socialize us. Without such mentors, it is difficult for Chicana doctoral students to develop a scholarly identity. The purpose of this study is to better understand the scholarly identification processes among Chicana doctoral students aspiring to the professoriate. This study adds activism to the scholarly identification process, aiming to understand how Chicana doctoral students become scholar-activists and the ways in which they embody a scholar-activist identity on social media.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**activism, Chicana, Chicana feminism, doctoral students, graduate students, testimonio

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

**NOTE (Advisory Committee):**Tamara Bertrand Jones, Professor Directing Dissertation; Vanessa Dennen, University Representative; Kathy Guthrie, Committee Member; Lara Perez-Felkner, Committee Member.

**SUBJECT:**Education, Higher

**SUBJECT:**Latin America

**SUBJECT:**Women's studies

**DEGREE:**Doctoral

## Record number: 83

**FILENAME:**Hirsch\_fsu\_0071N\_15440.pdf

**TITLE:**Familiarization of Dysarthric Speech Generalization between Speakers of Different Sex

**AUTHOR:**Hirsch, Megan Elizabeth

**MEMBER (professor directing thesis):**Lansford, Katlin L.

**MEMBER (committee member):**Morris, Richard Jack, 1950-

**MEMBER (committee member):**Kaschak, Michael P.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Communication and Information

**CORPORATE NAME:**Department of Communication Science and Disorders

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

**PHYSICAL DESCRIPTION:**1 online resource (37 pages)

**ABSTRACT:**Dysarthria is a motor speech disorder that affects various aspects of speech production, such as breath support, speech rate, articulation, and prosody. Traditional speech therapy involved behavioral changes to how a person with dysarthria speaks. Emerging evidence shows familiarization may be a viable alternative option for treatment. Familiarization targets the listener’s perceived intelligibility of speech produced by a speaker with dysarthria through training with speakers with dysarthria. Recent evidence showed familiarization effects generalize between test and training speakers with dysarthria who were the same sex, especially if the speech of the two speakers was perceptually similar. The current study investigates whether generalization occurs between speakers of different sex and the effect perceptual similarity has on this generalization. Listeners were recruited via Amazon’s Mechanical Turk and were presented with speech samples from a speaker with dysarthria. Listeners were assigned to one of two training conditions and completed a pre-test and post-test transcription task to measure level of intelligibility. Data collected was compared to and analyzed with historical data from Borrie et al. (2017a). Results showed a significant effect for level of similarity, indicating the listeners trained with a perceptually similar speaker to the test speaker showed greater improvements in intelligibility compared to listeners trained with a dissimilar speaker, regardless of the speaker’s sex. The listeners in the dissimilar training speaker conditions had variable intelligibility improvement scores following training. Results indicate familiarization effects generalize between speakers of different sex and that improvement is enhanced when trained with a perceptually similar speaker.

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

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

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

**NOTE (Keywords):**Adults, Dysarthria, Familiarization, Perceptual Learning

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

**NOTE (Advisory Committee):**Kaitlin L. Lansford, Professor Directing Thesis; Richard Morris, Committee Member; Michael Kaschak, Committee Member.

**SUBJECT:**Speech therapy

**DEGREE:**Masters

## Record number: 84

**FILENAME:**Hollingshead\_fsu\_0071N\_15326.pdf

**TITLE:**Geoarchaeological Investigations at Half Mile Rise Sink (8Ta98)

**AUTHOR:**Hollingshead, Analise Marie

**MEMBER (professor directing thesis):**Halligan, Jessi J.

**MEMBER (committee member):**Mehta, Jayur M. (Madhusudan)

**MEMBER (committee member):**Young, Seth A.

**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 (126 pages)

**ABSTRACT:**Half Mile Rise Sink (8TA98) is a submerged prehistoric site located approximately one hundred meters downriver from the Page-Ladson site in the Aucilla River of Northwest Florida. Here, all known Floridian Paleoindian projectile point types, numerous Archaic projectile point styles, and associated paleontological material were recovered from excavations during the 1960s. Through a multi-disciplinary approach, I present my results from new investigations at Half Mile Rise Sink in the aim to 1) define the geologic context and 2) discuss Half Mile Rise Sink as a multi-component prehistoric site. Half Mile Rise Sink is a unique site containing multiple cultural components due to fluctuating water levels, presenting the uniqueness of submerged prehistory coupled with terrestrial archaeology to understand what and how past peoples interacted with their landscape.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Archaic, geoarchaeology, lithic analysis, Paleoindian, southeastern archaeology, submerged prehistory

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

**NOTE (Advisory Committee):**Jessi J. Halligan, Professor Directing Thesis; Jayur M. Mehta, Committee Member; Seth A. Young, Committee Member.

**SUBJECT:**Archaeology

**DEGREE:**Masters

## Record number: 85

**FILENAME:**Howell\_fsu\_0071E\_15411.pdf

**TITLE:**Insights into Proteasome Quality Control: A Mechanistic Analysis of Proteasome Biogenesis and Clearance

**AUTHOR:**Howell, Lauren Anne

**MEMBER (university representative):**Zhu, Fanxiu

**MEMBER (committee member):**Wang, Yanchang, (Biomedical Sciences Professor)

**MEMBER (committee member):**Megraw, Timothy L.

**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 (128 pages)

**ABSTRACT:**Maintaining the balance of protein synthesis and degradation is essential for efficient proteostasis and organismal health. The 26S proteasome is a large, multisubunit proteolytic complex that functions as the primary mechanism for regulated protein degradation in eukaryotes. Nearly every biological pathway depends on proteasome-mediated catabolism to perform cellular functions or ensure the integrity of its components, making the maintenance of proteasome quality critical. The elaborate architecture and large size of the proteasome necessitates dedicated quality control mechanisms to ensure the integrity, abundance, and functionality of the complex. The mechanisms governing proteasome quality control have been implicated in numerous disease pathologies, emphasizing the importance of gaining insight into these cellular processes, which remain poorly understood. Toward this goal, the work set forth in this dissertation aims to elucidate the mechanistic underpinnings of proteasome quality control, focusing on the regulation of proteasome assembly and destruction. A cooperative network of regulatory mechanisms function to rapidly and faithfully assemble dozens of canonical subunits into a highly-organized, functional proteasome. Several alternative proteasome species with non-canonical subunit arrangements have been identified and are linked to diverse physiological and pathophysiological processes. The mechanisms that control canonical versus non-canonical proteasome biogenesis remain largely unknown. The first chapter of this dissertation aims to clarify the quality control mechanisms governing subunit incorporation during proteasome biogenesis. Failure of proteasome quality control can compromise the integrity of the complex and result in the accumulation of aberrant species that can disrupt the proteostatic balance, necessitating the critical requirement for a clearance pathway that has only recently been identified and remains poorly understood. The second chapter of this dissertation aims to study the spatial control of the proteasome during autophagic clearance and identify new factors mediating proteasome destruction. Together, the work presented in this dissertation provides new insight into the mechanisms of proteasome quality control and furthers our understanding into how these processes may be compromised to contribute to disease pathology.

**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):**Summer Semester 2019.

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

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

**NOTE (Advisory Committee):**Robert J. Tomko, Jr., Professor Directing Dissertation; Fanxiu Zhu, University Representative; Yanchang Wang, Committee Member; Timothy Megraw, Committee Member.

**SUBJECT:**Biology

**SUBJECT:**Cytology

**SUBJECT:**Molecular biology

**DEGREE:**Doctoral

## Record number: 86

**FILENAME:**Izci\_fsu\_0071E\_15416.pdf

**TITLE:**An Exploratory Study of Mother-Child Interactions Around Digital Media Applications

**AUTHOR:**Izci, Burcu

**MEMBER (professor directing dissertation):**Jones, Ithel

**MEMBER (university representative):**Roehrig, Alysia D., 1975-

**MEMBER (committee member):**Dennis, Lindsay Rae

**MEMBER (committee member):**Myers, John P. (John Patrick)

**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 (142 pages)

**ABSTRACT:**In recent years, touch screens and digital technologies have permeated all aspects of our lives and increasing numbers of children engage with those devices and digital media every day. Children age 8 or younger use tablets and digital applications for various activities including watching videos, playing digital games or reading e-books. The American Academy of Pediatrics recommends that parents should use high-quality educational media as well as engage in meaningful parent-child interactions in conjunction with tablet device use. In the literature, there is currently limited research that investigates parent-child joint activities and talk around touch screen tablets. The main goal of the study was to examine mother-child talk as they engaged in three distinct digital activities (e-book reading, video watching, and game playing) on a touch screen tablet device. It was expected that different types of mother-child talk would be observed during each digital activity. Three hypotheses were tested in the study. The first hypothesis predicted that there would be a difference in the total number utterances generated by mothers and children during three digital activities. The second hypothesis predicted that there would be a difference in the total number of utterances generated during e-book reading, compared to video watching and game playing. The third hypothesis predicted that there would be a positive correlation between children’s utterances across three digital activities and the measure of their receptive vocabulary. The current study’s research design was a within subjects (repeated measures) design where all participating mothers and children were engaged in three different digital activities in a different order. The findings of the current study suggest that mothers generated more utterances than their children across three digital activities. In addition, the type of digital activity caused differences in the total number of utterances generated by mothers and children. The findings of the study also demonstrated that the measure of children’s receptive vocabulary was not statistically correlated with the type or frequency of child utterances observed across the three digital activities.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**digital game play, e-book reading, mother-child talk, parent-child interactions, touch screen tablet, video watching

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

**NOTE (Advisory Committee):**Ithel Jones, Professor Directing Dissertation; Alysia Roehrig, University Representative; Lindsay Dennis, Committee Member; John Myers, Committee Member.

**SUBJECT:**Early childhood education

**SUBJECT:**Educational technology

**DEGREE:**Doctoral

## Record number: 87

**FILENAME:**Jackson\_fsu\_0071E\_15317.pdf

**TITLE:**Using Visual Supports to Increase the Comprehension of Science Texts for Children with Autism Spectrum Disorder

**AUTHOR:**Jackson, Elizabeth M. (Elizabeth Marie)

**MEMBER (professor directing dissertation):**Hanline, Mary Frances

**MEMBER (university representative):**Cortese, Juliann

**MEMBER (committee member):**Whalon, Kelly J.

**MEMBER (committee member):**Steacy, Laura M., 1981-

**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 (151 pages)

**ABSTRACT:**This study originally proposed a multitreatment (ABACAC) study design. This design was altered to an ABAB reversal design when both participants showed an increase in correct responding to science comprehension questions when just visual supports were introduced (e.g.,concept map and visual cues). Two Kindergarten boys diagnosed with autism spectrum disorder (ASD) participated in this study. This study presented the visual supports (e.g., concept map and visual cues) via iPad. The findings from this study support the findings found in accommodating students with ASD with concept maps, visual cues, and the use of technology. In addition, this study adds to the literature by helping participants make meaning and understand relationships with visual supports that accommodate the weak central coherence theory. Social validity measures collected from both the participants and their mothers show this study was socially important, socially acceptable, and socially significant.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**June 14, 2019.

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

**NOTE (Advisory Committee):**Mary Frances Hanline, Professor Directing Dissertation; Juliann Cortese, University Representative; Kelly Whalon, Committee Member; Laura Steacy, Committee Member.

**SUBJECT:**Special education

**DEGREE:**Doctoral

## Record number: 88

**FILENAME:**Jensen\_fsu\_0071E\_15249.pdf

**TITLE:**Between Past(S) and Future(S): Translating the Space of Appearance in Middle English Arthurian Literature

**AUTHOR:**Jensen, Christopher

**MEMBER (professor directing dissertation):**Johnson, David F. (David Frame), 1956-

**MEMBER (university representative):**Leushuis, Reinier, 1969-

**MEMBER (committee member):**Fumo, Jamie

**MEMBER (committee member):**Boehrer, Bruce Thomas

**MEMBER (committee member):**Coldiron, A. E. B. (Anne Elizabeth Banks)

**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 (204 pages)

**ABSTRACT:**The genre of Arthurian literature is defined by its presentation of a noble society of knights and ladies, most often utilized in literary texts as a kind of medieval shorthand for acceptable social behavior, perhaps especially in aristocratic settings. Knighthood is configured most often in French-language literature of the “twelfth-century renaissance” as an aspirational masculine social identity, an office ordained by God for the elite class. When that literature was translated into Middle English in the following centuries, however, the different social functions and expectations of literary chivalry in England provided a distinct terroir in which it might grow, producing narratives with a courtly cast for a decidedly broader audience, an audience perhaps far removed from the literal offices of king and knight. Arthur’s knights in Middle English literature thus often embody a more generalized ethos, but the imaginary space of Arthurian Britain ensures that its specular capacity for social commentary and the stimulation of aspirational identity remains intact, even when the practicable nobility of Arthur’s court does not necessarily cohere across texts and traditions.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**May 20, 2019.

**NOTE (Keywords):**affect, chivalry, King Arthur, Middle English, Old French, translation

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

**NOTE (Advisory Committee):**David F. Johnson, Professor Directing Dissertation; Reinier Leushuis, University Representative; Jamie C. Fumo, Committee Member; Bruce T. Boehrer, Committee Member; A. E. B. Coldiron, Committee Member.

**SUBJECT:**Literature, Medieval

**SUBJECT:**Ethics

**DEGREE:**Doctoral

## Record number: 89

**FILENAME:**KLEIN\_fsu\_0071E\_15412.pdf

**TITLE:**Rif1 Is Necessary to Maintain Epigenetic State in Human Cells

**AUTHOR:**Klein, Kyle N.

**MEMBER (professor directing dissertation):**Gilbert, David M.

**MEMBER (university representative):**Gunjan, Akash

**MEMBER (committee member):**Bass, Hank W.

**MEMBER (committee member):**Yu, Hong-Guo

**MEMBER (committee member):**Chadwick, Brian P.

**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 (107 pages)

**ABSTRACT:**DNA is replicated in a defined temporal order termed the RT program. Ordered DNA replication is conserved in eukaryotes, yet its biological significance remains enigmatic. 3D genome organization as assayed by Hi-C has revealed that RT is highly correlated with genome architecture at two scales. Developmentally programmed changes in RT occur in units that align with sub-megabase chromatin architectural units known as TADs and early and late replicating chromatin is segregated into separate A and B sub-nuclear compartments respectively. Transcriptionally permissive histone modifications are associated with early replication and A nuclear compartmentalization. Conversely, transcriptionally repressive histone modifications are associated with late replication and B nuclear compartmentalization. However, studies of mechanisms linking RT and chromatin architecture with epigenetic chromatin modifications have been difficult since mutation of chromatin regulatory proteins have found only small, localized changes in the RT program, not global disruption of ordered replication. Indeed, depletion of key architectural proteins such as CTCF and cohesin disrupts TAD structure but has little effect on compartments or RT. RIF1 is the only protein shown to have a conserved role in regulating RT genome wide. To address the role of RT in organizing epigenetic chromatin modifications and genome structure we have generated RIF1 knockouts via CRISPR/Cas9 genome editing in hESCs and the cancer cell line HCT116. While RT changes in HCT116 mirrored those seen in previously published human and mouse RIF1 null cell lines, remarkably, hESC null cells lose almost all detectable temporal replication specificity, despite retaining pluripotency, a nearly normal transcriptome, and cell cycle progression. In both cell lines, the effect on RT was due to increased stochastic cell to cell variation in RT, rather than discrete RT changes as previously thought. Hi-C detected significant changes in compartments driven by changes in interactions between peaks of specific histone marks that coordinately increase or decrease in intensity. Heterochromatic H3K9me3 peaks were globally reduced in intensity, but highly enriched in both peak intensity and interaction strength at certain loci that remained late replicating. H3K27me3 showed cell line specific changes, becoming enriched or excluded from H3K9me3-rich domains in hESCs or HCT116, respectively. H3K27ac peaks also showed a global decrease in peak intensity and interactions between peaks were significantly weakened. H3K4me3 peak intensity and inter-peak interactions were depleted in the A nuclear compartment and enriched in the B nuclear compartment. TAD architecture and Rad21 binding was largely unaffected in both cell lines. We conclude that RIF1 is necessary to maintain the global epigenetic landscape and suggest a model in which RT regulates chromatin and compartment identity in human cells.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**epigenetic state, genome organization, human embryonic stem cells, Replication Timing, RIF1

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

**NOTE (Advisory Committee):**David M. Gilbert, Professor Directing Dissertation; Akash Gunjan, University Representative; Hank W. Bass, Committee Member; Hong-Guo Yu, Committee Member; Brian P. Chadwick, Committee Member.

**SUBJECT:**Molecular biology

**SUBJECT:**Cytology

**SUBJECT:**Genetics

**DEGREE:**Doctoral

## Record number: 90

**FILENAME:**KellerIII\_fsu\_0071E\_15285.pdf

**TITLE:**The Fall

**AUTHOR:**Keller, Raymond Allen, III

**MEMBER (professor directing dissertation):**Stuckey-French, Elizabeth

**MEMBER (university representative):**Stover, Tim

**MEMBER (committee member):**Kirby, David, 1944-

**MEMBER (committee member):**Horack, Skip

**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 (145 pages)

**ABSTRACT:**This novel, whose title is The Fall, attempts to tell a modern day story of the fall of man (traditionally found in the Book of Genesis), from a greater, more humane and moral state characterized by goodness toward himself and others, to a lesser state characterized by selfishness, narrow ambition and the manipulation and oppression of those around him. The protagonist’s name is Nullius Nominis (which means “no name” in Latin), but at the beginning of the novel, a passage in which he is unexplainably falling from a very tall building known as The Capitol, seat of the Republic, he is only described as “the falling man” because he has lost his memory. Unaware of what has set his current circumstance in motion, he only knows that he is falling. Somewhat miraculously, Nullius is saved from death in the fall, and is rescued by a maintenance man named Minos, who takes him beneath the Capitol and cares for him. But, eager to find out what has happened to himself, Nullius leaves in the middle of the night, only to find that there are posters with his picture on it hung inside the Capitol: he is wanted for questioning regarding the mysterious death of the Governor. What follows is a journey of sorts, from the bowels of the Capitol to the top floor, fraught with danger and intrigue, as, in his attempt to acquit himself, Nullius learns of his own strange history, as well as that of humanity itself, and how all this fits in to the very future of the Republic.

**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 2, 2019.

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

**NOTE (Advisory Committee):**Elizabeth Stuckey-French, Professor Directing Dissertation; Timothy Stover, University Representative; David Kirby, Committee Member; Bruce “Skip” Horack, Committee Member.

**SUBJECT:**American literature

**DEGREE:**Doctoral

## Record number: 91

**FILENAME:**King\_fsu\_0071E\_15332.pdf

**TITLE:**An Exploration of the Effects of Primary and Secondary Trauma on Child Welfare Workers' Mental Health and Commitment to the Field

**AUTHOR:**King, Erin A. (Erin Albrecht)

**MEMBER (professor directing dissertation):**Wilke, Dina J.

**MEMBER (university representative):**McWey, Lenore M.

**MEMBER (committee member):**Tripodi, Stephen J.

**MEMBER (committee member):**Randolph, Karen A.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Social Work

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

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

**ABSTRACT:**The field of child welfare continues to suffer due to high rates of worker turnover. The child welfare workforce plays a crucial role in promoting child well-being and preventing abuse and neglect. When workers leave their jobs, sometimes after only a few months, at-risk children are negatively impacted. Work-related trauma exposure of workers is an understudied area. This study revealed three categories of trauma workers experience as a part of their jobs. Analyses examined the relationship between type of trauma exposure and personal and work-related outcomes of child welfare workers in the state of Florida. This study examined workers’ exposure to trauma from a stress-response framework. Conservation of resources theory and identity theory informed the conceptual model for this study. This model examined how different typologies of trauma influence workers’ mental health and commitment to the field of child welfare. Mental health was examined as a potential mediator in the relationship between trauma and commitment to the field. A sample of child welfare workers who had been employed in the field for 18-months (n=657) responded to items relating to their experiences of client perpetrated violence, deaths or injuries on their caseloads, and secondary trauma. They also completed scales measuring their current levels of depression, anxiety, PTSD (at 18 months), and their overall commitment to the field of child welfare (measured at 2 years post-hire). T-tests, ANOVA analyses, and structural equation modeling (consisting of confirmatory factor analysis and path analysis) were used to determine the prevalence, severity, and effects of trauma exposure on workers. Three typologies of trauma emerged: primary trauma, caseload trauma, and secondary trauma. Threat emerged as the most reported form of primary trauma in this sample (78.4%), followed by non-physical violence (44.8%), and then assault (5.7%). Twenty-six percent (26%) of workers met the criteria for moderate to severe secondary trauma symptomatology. Relating to caseload trauma, 7.7% (n=49) of workers reported death of a child on their caseload due to maltreatment, 16.7% (n=106) reported the death of a child due to accident/injury, and 29.4% (n=187) reported the severe illness/injury of a child on their caseload. Moderate to severe levels of anxiety and PTSD were found in 4.3% and 3.7% of these child welfare workers. Depression levels for workers were higher, with 16.6% reporting moderate levels of depression. Structural equation modeling (SEM) analysis indicated that primary trauma had a small, but positive relationship with commitment to the field (B=.17, p<.05). Caseload trauma predicted workers’ levels of secondary trauma (B=.14, p<.05), and secondary trauma had a strong, predictive relationship with worker mental health (B=.77, p<.001). Each type of trauma contributed differentially to workers’ personal and organizational outcome. These findings contribute important information about the prevalence and effects of different types of trauma child welfare workers face as a part of their job. Results of this study have implications for administrative practice, training, and intervention development in child welfare. Limitations of this study included participant attrition, a limited measurement period for mental health, and the use of dichotomous variables to measure primary and caseload trauma. Future research should focus on exploring these relationships between worker trauma exposure and personal/organization outcomes longitudinally and by using qualitative research methods to examine workers’ experiences in more depth.

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

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

**NOTE (Date of Defense):**June 24, 2019.

**NOTE (Keywords):**child welfare workforce, client-perpetrated violence, mental health, secondary trauma, trauma exposure

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

**NOTE (Advisory Committee):**Dina J. Wilke, Professor Directing Dissertation; Lenore McWey, University Representative; Stephen J. Tripodi, Committee Member; Karen A. Randolph, Committee Member.

**SUBJECT:**Social service

**DEGREE:**Doctoral

## Record number: 92

**FILENAME:**Klemp\_fsu\_0071E\_15360.pdf

**TITLE:**Efficacy of Nighttime Protein Feeding during 12 Weeks of Resistance Training on Functional and Cognitive Adaptations in Older Adults

**AUTHOR:**Klemp, Alex

**MEMBER (professor directing dissertation):**Kim, Jeong-Su

**MEMBER (university representative):**Contreras, Robert J.

**MEMBER (committee member):**Ormsbee, Michael J.

**MEMBER (committee member):**Panton, Lynn B. (Lynn Biship)‏

**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 (191 pages)

**ABSTRACT:**Introduction. A growing body of evidence suggests a strong relationship between age-related declines in muscle mass, strength, and power with impaired cognitive function. To mitigate these effects, current recommendations consist of resistance exercise training (RET) with additional protein intake. The benefits of RET and additional protein intake are purposed to be attributed to increases in muscle protein synthesis (MPS), insulin-like growth factor-1 (IGF-1), and improved sleep. Previous data indicated that immediate post-exercise protein consumption optimizes adaptations to RET, while some long-term data are equivocal. Moreover, nighttime pre-sleep protein intake may be important as overnight MPS can be lower than basal rates, which is problematic in older adults who exhibited blunted MPS to protein intake. However, this has not been well examined in older adults, except for one recent study with a suboptimal protein dose. The main objective of the present study was to evaluate the efficacy of nighttime pre- sleep protein intake on functional and cognitive adaptations during 12 weeks of RET in older adults in comparison to the traditional recommendation of immediate post-exercise protein intake. Our central hypothesis was that nighttime pre-sleep protein intake would significantly improve functional, and cognitive adaptations as much as immediate post-exercise protein group in comparison to the exercise only group. Methods. Healthy, sedentary, older males (N=30) between the ages of 60-75 years were randomly assigned to 1 of 3 groups: 1) Protein immediately post-exercise (Post-ex, n=9), 2) Protein 30 minutes prior to sleep (Pre-sleep, n=11), or 3) No protein supplementation (Ex only, n=10). All 3 groups performed the same 12-week RET program, 2x/wk. The dependent variables consisted of pre to post changes in body composition (e.g., lean mass, fat mass, % body fat), nitrogen balance, free plasma IGF-1, profile of mood states (POMS), sleep evaluation (sleep quantity and quality), and cognitive processing speed (digit symbol substitution task and pattern comparison). Maximum muscular strength (1-RM), muscular power, and quadriceps muscle hypertrophy (via muscle thickness) were assessed at pre-, mid-, and post-intervention. Results. Post-ex exhibited a significant reduction in % body fat (-6%, p = 0.018), but there was no significant change in Pre-sleep (0%, p > 0.999) or Ex only group (–4%, p = 0.077). Post-ex demonstrated accelerated quadriceps muscle hypertrophy from pre to mid (+9%, p = 0.003); however, pre to post increases were similar between groups. Pre to post 1-RM improvements were not different between groups; however, Post-ex (+6%, p = 0.009) and Pre-sleep (+9%, p = 0.003) demonstrated significant increases in chest press 1-RM from mid to post, while Ex only did not (+4%, p = 0.226). Peak power was significantly enhanced in Pre-sleep (+10%, p = 0.040) with a similar increase observed in Post-ex (+13%) but not in Ex only (+2%). All groups were not effective for improving cognitive processing speed. Satiety was significantly higher in Pre- sleep compared to Ex only at post (+89%, p = 0.019). There were no significant changes in POMS or sleep evaluation. Post-ex (+27%, p = 0.022) and Pre-sleep (+40%, p < 0.001) displayed significant increases in free plasma IGF-1, while Ex only (+18%, p = 0.080) did not. Free IGF-1 levels were inversely related to fat mass and % body fat, which demonstrated significant negative (p = 0.002 and 0.046, respectively) moderate (r = -0.667) and low (r = - 0.463) correlations, respectively. Conclusions. Our findings suggest that during a 12-week RET program, 40 g of additional protein intake, but not specifically at post-exercise or pre-sleep time points, augmented the rate of upper body strength adaptations, enhanced peak power, and increased morning satiety levels in older adults to a greater extent than exercise only. Our findings also indicate that post-exercise protein consumption can further enhance resistance exercise-induced improvements in body composition, primarily though fat mass loss, and accelerate muscle hypertrophy in comparison to pre-sleep and exercise only interventions. The reduced fat mass is associated with increased free IGF-1 levels, although the mechanism is not clear.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Hypertrophy, Older Adults, Protein, Resistance exercise, Skeletal muscle, Strength

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

**NOTE (Advisory Committee):**Jeong-Su Kim, Professor Directing Dissertation; Robert J. Contreras, University Representative; Michael J. Ormsbee, Committee Member; Lynn B. Panton, Committee Member.

**SUBJECT:**Kinesiology

**DEGREE:**Doctoral

## Record number: 93

**FILENAME:**Kleuver\_fsu\_0071E\_15147.pdf

**TITLE:**Using State Policy Determinants to Predict for-Profit Undergrraduate Enrollment Share at Degree-Granting Institutions

**AUTHOR:**Kleuver, Steven A.

**MEMBER (professor directing dissertation):**Park, Toby J.

**MEMBER (committee member):**Hu, Shouping

**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 (148 pages)

**ABSTRACT:**For-profit institutions are thought to fill the educational gap when traditional nonprofit colleges fail to serve the needs of an evolving student population. Over the past several decades, the enrollment share of undergraduate students attending for-profit institutions in lieu of traditional nonprofit institutions has expanded substantially. While this growth has been noted by researchers, comparatively little is known about what determinants impact the state enrollment share of students attending for-profit institutions. Furthermore, the chronicling of state policy directed at for-profit institutions has not been completed in a concise and accessible manner. This study uses a panel dataset spanning the years 1997 to 2015 to measure for-profit enrollment to determine the effects of select state-level policy variables on the undergraduate enrollment share of for-profit institutions. Results of this study showed that state policies do impact for-profit enrollment share. After cataloging relevant state policies, 18 laws across 10 states were found to directly address the for-profit sector. As predicted, laws favorable to for-profit institutions (positive laws) were found to increase for-profit enrollment share and laws regulating for-profit institutions (negative laws) were found to decrease for-profit enrollment share. Educational appropriations per student FTE and the existence of a consolidated governing board were also found as controllable variables that impact for-profit enrollment share.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**July 9, 2019.

**NOTE (Keywords):**difference-in-difference, enrollment share, federal policy, for-profit education, proprietary schools, state policy

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

**NOTE (Advisory Committee):**Toby Park-Gaghan, Professor Directing Dissertation; James Bowman, University Representative; Shouping Hu, Committee Member; Robert Schwartz, Committee Member.

**SUBJECT:**Education, Higher

**SUBJECT:**Public administration

**DEGREE:**Doctoral

## Record number: 94

**FILENAME:**Kochman\_fsu\_0071E\_15283.pdf

**TITLE:**Trauma and Aging: Dramatic Women Escaping the Presumption of Decline

**AUTHOR:**Kochman, Deborah A.

**MEMBER (professor directing dissertation):**Dahl, Mary Karen, 1945-

**MEMBER (committee member):**McKelvey, Patrick T. (Patrick Timothy)

**MEMBER (committee member):**Salata, Kris

**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 (158 pages)

**ABSTRACT:**This dissertation examines the aging woman trope and the idea of the “trauma and aging” in theatre and performance. I argue that the pervasiveness of negative imagery associated with aging women as well as decline narratives of age contribute to individual as well as cultural trauma that necessitates active resistance and creative responses to the violence enacted upon the aging. I maintain that trauma and aging is not solely an individual phenomenological experience resulting from a singular moment of violence or traumatic event, but can be the result of insidious or everyday trauma. I argue that identifying negative images helps to identify stereotype threats and decline narratives to distinguish them from individualized stories of aging and fuller, more expansive narratives/experiences. The project engages literary theory, theatre studies, and age studies as well as theories of violence and trauma to examine the aging female trope as a popular literary and theatrical trope within Anglo-American media. I analyze the dramatic text or script, the text or script in performance, and the relationship of the text or performance to its social, political, and cultural context as well as how the objects (images of aging women) might offer counter-examples to the decline narrative of age. The primary goal of the project is to provide tools with which to unpack and analyze other objects regarding ageism and potentially identify ways that views of aging women are circulated in society to a similar effect. The analysis follows a chronology of representations beginning with Albee’s "Three Tall Women" and continues with textual and performance analysis of Paula Vogel’s "The Oldest Profession" and Caryl Churchill’s "Escaped Alone." Each chapter in this dissertation presents its own research question(s) and case study analysis that advances my argument with regard to 1) the so-called experience of “trauma and aging,” 2) how images in theatre and performance have supported negative stereotypes of aging, and 3) how counter-examples from theatre and performance might broaden the conversation, perception, and awareness about the experience of aging, particularly for women. The goal of the project is to go beyond simply identifying plays and performances where stereotypes and tropes reinforce, as Ann David Basting points out, the “stubbornly persistent” decline narrative of age. The project seeks to complicate the discussion about aged figures in theatre and performance expand the conversation to offer counter-examples that contribute to an archive of aging narratives that offer fuller, more expansive views aging. These conversations are crucial to the humanities not only because theatre scholars have largely ignored the discussion of aging, but also particularly in this social-cultural moment when ageism, particularly against older women, remains a pervasive and dangerous human rights violation.

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

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

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

**NOTE (Keywords):**Aging, Older women, Theatre, Trauma

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

**NOTE (Advisory Committee):**Mary Karen Dahl, Professor Directing Dissertation; Anne Barrett, University Representative; Patrick T. McKelvey, Committee Member; Kris Salata, Committee Member; Aaron C. Thomas, Committee Member.

**SUBJECT:**Theater

**SUBJECT:**Aging

**DEGREE:**Doctoral

## Record number: 95

**FILENAME:**LHeureux\_fsu\_0071N\_15437.pdf

**TITLE:**Preserving Regional Identity in an Urbanizing Landscape: A Neighborhood Smart Growth Plan

**AUTHOR:**L'Heureux, Gabriel Gerard

**MEMBER (professor directing thesis):**Ransdell, Marlo E.

**MEMBER (committee member):**McLane, Yelena

**MEMBER (committee member):**Webber, Steven B.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Fine Arts

**CORPORATE NAME:**Department of Interior Architecture and Design

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

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

**ABSTRACT:**A true understanding of urbanism means acknowledging the paradoxical relationship that exists between established community and constant development. Originally, an approach to balancing the growing congestion of overpopulated suburbs, urbanization in many regional towns has become more of a trend than a means of necessity. Effects such as gentrification are changing the social make-up of communities and re-shaping regional design aesthetics. The new aesthetics seen in redeveloped communities are rooted in International and Postmodern design styles that are a stark contrast to the existing regional vernacular, creating a sense of territorial aesthetic autonomy. Preserving the past can only be accomplished through striving to counter the lack of place and identity of International and Postmodern styles, with an emphasis on modern tradition that is tied to the cultural and geographical context of a region (Framton, 2007). This ideology seeks to prevent a nationalist view of architectural style while attempting to mediate between the local and global languages of design. The focus of this research explores performative approaches to architectural regionalism in Tallahassee FL, and the extirpative effects that these practices have on the town’s regional identity as it pertains to aesthetic. This study chose Levy Park in Tallahassee due to the visible effects of gentrification that are currently ongoing in the area. Levy Park is a neighborhood located in mid-town comprised of pre and post WWII houses that have a deep intrinsic connection to Florida’s history. Characteristics such as urban amenities, artistic individuality, and charming vernacular style make this area highly desired, but major changes in development practices have occurred in the past ten years which threaten the neighborhoods authenticity. The data collection methods for this research will include a layered approach consisting of two phases. Phase one consists of a collection of demographic statistics and phase two includes a detailed cataloging of recent infill projects, historical and archival data of demolished and renovated structures, and local/ municipal city codes and policies that have affected the area. The research findings will identify the effects that performative practices in design have on determining and maintaining a regional identity in Tallahassee, FL. It will also look at the efficacy of current design trends pertaining to urban infill in the neighborhood of Levy Park. Further, it will provide smart growth solutions that promote a critical understanding of regionalism and celebrate the historic architectural styles that aid in maintaining a strong regional identity.

**NOTE (Submitted Note):**A Thesis submitted to the Department of Interior Architecture and Design in partial fulfillment of the requirements for the degree of Master of Science.

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

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

**NOTE (Keywords):**In-fill Development, Preservation, Regional Identity, Regionalism, Smart Growth, Urbanism

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

**NOTE (Advisory Committee):**Marlo Ransdell, Professor Directing Thesis; Yelena McLane, Committee Member; Steven Webber, Committee Member.

**SUBJECT:**Architecture

**SUBJECT:**Demography

**SUBJECT:**History

**DEGREE:**Masters

## Record number: 96

**FILENAME:**Latinsky\_fsu\_0071E\_15284.pdf

**TITLE:**Weathering the Storm: An Examination of Fetal Loss, Maternal Age, and Norms of Race and Sexuality

**AUTHOR:**Latinsky, Andrew

**MEMBER (professor directing dissertation):**Ueno, Koji

**MEMBER (university representative):**Grzywacz, Joseph G.

**MEMBER (committee member):**Burdette, Amy M.

**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, 2019

**PHYSICAL DESCRIPTION:**1 online resource (104 pages)

**ABSTRACT:**This dissertation tests if fetal loss can be applied as an extension of prior literature on the weathering hypothesis. To do so, this study extends upon the weathering hypothesis: the observation that blacks experience substantially higher levels of stress than their white counterparts in the United States, that this gap only increases as individuals become older, and that this resulting stress is correlated with negative health outcomes, especially chronic disease. This outcome is proposed to be caused by subtle racist events and broader institutional racism, resulting in the literal accumulation of stress in the body. The outcome of weathering can be measured in physical responses of the individual’s body such as cortisol levels and blood pressure (referred to collectively as allostatic load). Because negative events lead to these stress responses being more common in blacks than whites, resulting in higher allostatic load, there is a corresponding increase in the incidence of health problems such as chronic inflammation. In prior research, the impact of weathering on maternal and child health has been tested for by examining the choice of early childbearing among black mothers. This is a time period where the gap in allostatic load measures is smaller across race. Prior studies examining the weathering hypothesis have determined that for minority women, and minority women only (particularly black women), the risk of maternal mortality, premature birth, low birth weight, and infant mortality is smaller when women become pregnant in adolescence as opposed to young adulthood. However, in spite of a fetal loss gap by race that is similar to the aforementioned maternal and child health outcomes, there is a lack of research into if effects associated with the weathering hypothesis occur with fetal loss. Two analyses are performed to test this relationship. The first analysis consists of a series of multilevel logistic models on approximately seventeen thousand pregnancy outcomes in the National Longitudinal Survey of Adolescent to Adult Health (Add Health), examining the relative risk of fetal loss based on racial and age characteristics of mothers at the time of pregnancy. The second analysis follows with a series of logistic regressions examining approximately four million pregnancies in the National Vital Statistics Survey (NVSS) for the years 2016 and 2013, also examining the influence of the mother’s race, age, and its interaction on fetal loss risks in each year. These analyses find that for each sample (including both years of the NVSS), black women overall have higher risks of fetal loss than their white counterparts. However, for black and Hispanic-black women, the risk of fetal loss was lower in adolescent pregnancies than adult pregnancies, consistent with the weathering hypothesis. The findings from this dissertation suggest that the effects of weathering on maternal and child healthcare outcomes can in fact be extended to the issue of fetal loss, thereby suggesting that stress resulting from racism has a broader collection of harms than previously recognized.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Health, Life Course, Maternal and Child Health, Quantitative, Race, Weathering

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

**NOTE (Advisory Committee):**Koji Ueno, Professor Directing Dissertation; Joseph Grzywacz, University Representative; Amy Burdette, Committee Member; Miranda Waggoner, Committee Member.

**SUBJECT:**Sociology

**SUBJECT:**Medical sciences

**SUBJECT:**African Americans--Study and teaching

**DEGREE:**Doctoral

## Record number: 97

**FILENAME:**Lehn\_fsu\_0071E\_15336.pdf

**TITLE:**A Renewed Critical Pedagogy: Rethinking Activism within Writing Program Administration

**AUTHOR:**Lehn, Jeanette Louise

**MEMBER (professor directing dissertation):**Graban, Tarez Samra

**MEMBER (university representative):**Jones, Tamara Bertrand

**MEMBER (committee member):**Neal, Michael R.

**MEMBER (committee member):**Lathan, Rhea Estelle, 1961-

**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 dissertation is a qualitative study of activism within writing program administration though the lens of the term critical pedagogy. The study responds to calls in the field of rhetoric, composition, and writing studies to address inequalities and to forward social justice ends. This disciplinary desire can be evidenced in chairs’ addresses at the flagship conference, The Conference on College Composition and Communication, in institutional mission statements and in the pedagogy of individual instructors. In the past, local efforts to respond to social justice have been classified under the term critical pedagogy. While the term critical pedagogy has fallen out of favor, I argue that the term still holds utility for conceiving of a contemporary response to progressive desires for teaching. The term critical pedagogy, often associated with Paulo Freire, a Chilean activist, is commonly associated with designing classroom practice. The term evolved into more frequent parlance in the 1960s and 1970s as institutional structures changed, and again in the 1990s, as issues of identity and culture were more centrally the focus of composition studies. One conception of critical pedagogy is that individual teachers can create social change through classroom practice. It is difficult to address global or systemic problems solely at the local level, and in reconceiving of critical pedagogy for contemporary exigencies, the need to theorize activism on a systemic level is salient. This dissertation study accounts for that critique of critical pedagogy by theorizing critical pedagogy from institutional and systemic angles utilizing a method called Critical Systems Theory (CST). To theorize critical pedagogy and activism from both individual and institutional angles simultaneously, this dissertation utilizes qualitative methods, chiefly interviews, chosen for their ability to reveal relationships between actors within the educational system. Ten writing program administrators from “research extensive” universities (Carnegie Classification D/RU-E) were interviewed about institutional contexts, activism, critical pedagogy, multiculturalism, and the treatment of race and racism within TA training. The research utilizes an ecological framework and is done for the purpose of institutional critique. Participants were recruited via e-mail and the “snowball” referral method. Interviews were conducted over Skype and transcripts of the interviews were coded for patterns. Interviewees were offered three levels of participation to allow for confidentiality: confidential participant (name and institution withheld); named participant (name and institution present); and collaborator (name and institution present with the option for collaborators to give feedback on data and results). Within the study, the writing program is conceived of as an entity within multiple ecologies and the results of this research reflect that by presenting the results in terms of “inner” and “outer” spaces. The inner spaces refer to aspects of the data pertaining to classroom pedagogy and the internal administration of writing program administration. The outer spaces refer to aspects of writing program administration connected to the institutional, external stakeholders and the discipline. Opportunities for administrative agency within writing programs or “points of leverage” as they are referred to in the dissertations included dialogue, the design of both curriculum and assignments and the mentoring of teaching assistants within graduate programs. Opportunities for administrative agency in outer spaces included outreach, positive collaboration and acting as a representative for writing studies outside of department spaces. Additionally, the study describes intersectional factors that modified writing program administrator agency including identities or philosophies, location, geography, and pre-existing exigencies that modified available resources. This data can be used for the purposes of describing the dynamic and situated positionality of a writing program administrator. Limitations of this study included the limitations of qualitative research related to the small sample size and the difficulty of creating findings from narrative data. Future research can be done in terms of replicating this study on a larger scale or looking more extensively into more detailed and specific aspects of social justice action within writing programs.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**activism, composition, critical pedagogy, Institutional critique, rhetoric, writing program administration

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

**NOTE (Advisory Committee):**Tarez Samra Graban, Professor Directing Dissertation; Tamara Bertrand Jones, University Representative; Michael Neal, Committee Member; Rhea Lathan, Committee Member.

**SUBJECT:**Education

**DEGREE:**Doctoral

## Record number: 98

**FILENAME:**Lerner\_fsu\_0071E\_15136.pdf

**TITLE:**General versus Specific Aspects of Self-Regulation as Predictors of Academic Skills and Internalizing Symptoms: A Model Comparison Approach

**AUTHOR:**Lerner, Matthew Daniel

**MEMBER (professor directing dissertation):**Lonigan, Christopher J.

**MEMBER (university representative):**Catts, Hugh W. (Hugh William), 1949-

**MEMBER (committee member):**Kofler, Michael J.

**MEMBER (committee member):**Cougle, Jesse R. (Jesse Ray), 1975-

**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 (120 pages)

**ABSTRACT:**The relation between self-regulation and both academic skills and internalizing symptoms is well-established. However, open questions remain regarding the nature of this relation and about whether similar or different aspects of self-regulation are most strongly related to academic skills vs. internalizing symptoms. Similarly, available evidence suggests that self-regulation, as measured by self-report (i.e., effortful control; EC), moderates the relation between temperament-based risk and internalizing psychopathology, but less is known regarding the status of direct, behavioral measures of self-regulation (i.e., executive function; EF) as potential moderators of that relation. This study tested competing models of EF in a sample of high school students (M age = 16.09 years, SD = 1.04 years). The preferred model was a bifactor model including a general EF factor (EFg) and specific working memory (WM) and shifting (SH) factors. This model was used to examine the relation between EF and skills in reading and math and to test specific EF components, as well as EC, as potential moderators of temperament-based risk for internalizing symptoms. The WM specific factor was strongly, positively related to reading and math, but the EFg and SH factors were not. EC moderated the relation between negative affectivity and panic symptoms. The SH-specific EF factor moderated temperament-based risk for depression symptoms, but the EFg and WM factors did not, nor did EC.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**anxiety, depression, executive function, mathematics, reading, self-regulation

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

**NOTE (Advisory Committee):**Christopher J. Lonigan, Professor Directing Dissertation; Hugh W. Catts, University Representative; Michael Koffler, Committee Member; Jesse Cougle, Committee Member; Christopher Schatschneider, Committee Member.

**SUBJECT:**Psychology

**SUBJECT:**Clinical psychology

**DEGREE:**Doctoral

## Record number: 99

**FILENAME:**Li\_fsu\_0071E\_15255.pdf

**TITLE:**Enhancement of Nitrogen Use Efficiency and Mitigation of Nitrous Oxide Emission in Agricultural Fields

**AUTHOR:**Li, Simeng

**MEMBER (professor directing dissertation):**Chen, Gang, 1969-

**MEMBER (university representative):**Sang, Qing-Xiang

**MEMBER (committee member):**Clark, Clayton J.

**MEMBER (committee member):**Tang, Youneng

**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 (209 pages)

**ABSTRACT:**Recent intensification of agriculture in face of the continuously increasing food demand has caused many environmental and socioeconomic problems. Excessive use of nitrogen (N) fertilizers is prevalent on many farms today. However, a large proportion of the N applied to agricultural soil contributes very little to crop production. Instead, a considerable amount of N is lost via leaching into groundwater, via runoff into surface water, and via nitrous oxide (N2O) emission into the atmosphere. As a result, the ecosystem is negatively impacted. Sustainable N management should aim at supplying sufficient N for optimum crop growth and development, while keeping losses to the environment to a minimum. Towards this goal, it is essential to enhance N retention and at the same time mitigate N2O emission in agricultural soil. Being the leader of one USDA project, I investigated the effects of different N management approaches that are based on the use of biochar, dicyandiamide (nitrification inhibitor) and polyacrylamide (superabsorbent hydrogel) in agricultural soils. It was found that a significantly higher amount of ammonium (NH4+) could be retained in the biochar-amended soil, comparing to the control soil. However, the retention of other ionic forms of N, such as nitrite (NO2-) and nitrate (NO3-), was barely improved. In fertilized soil, nitrification is a common process that transforms NH4+ into NO2- and eventually NO3-. To limit this transformation, the effects of one of the most commonly used nitrification inhibitor, i.e., dicyandiamide (DCD), was studied in combination with biochar. Based on the experimental data, mathematical models were developed to estimate the rate of nitrification impacted by the inhibition of persistently degrading DCD. It was discovered that the presence of biochar accelerated the biodegradation of both DCD and NH4+, but effectively reduced the spatial separation between the two. Depending on the soil properties and environmental conditions, the combined use of DCD and biochar can have versatile effects on nitrification inhibition. Also, considering the great amount of field data reported in the literature, statistical methods such as data synthesis and meta-analysis were also exploited to excavate the insightful information on the effectiveness of different soil amendments (e.g., biochar) in terms of N retention, crop production and N2O emission. Lastly, the recalcitrance of biochar, which is directly related to biochar’s soil carbon sequestration potential, was also discussed. In order to quantify and compare the soil carbon sequestration potential of biochar produced from different conditions and feedstock types, a carbon-based recalcitrance index was developed using a state-of-the-art thermochemical technique.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**May 6, 2019.

**NOTE (Keywords):**biochar, carbon sequestration, hydrogel, meta-analysis, nitrification inhibition, recalcitrance

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

**NOTE (Advisory Committee):**Gang Chen, Professor Directing Dissertation; Qing-Xiang Amy Sang, University Representative; Clayton J. Clark, II, Committee Member; Youneng Tang, Committee Member.

**SUBJECT:**Environmental engineering

**SUBJECT:**Chemical engineering

**DEGREE:**Doctoral

## Record number: 100

**FILENAME:**Li\_fsu\_0071E\_15420.pdf

**TITLE:**Ultrafast Dynamics in Warm Dense Matter Materials and Halide Perovskite

**AUTHOR:**Li, Dong

**MEMBER (professor directing dissertation):**Cao, Jianming

**MEMBER (university representative):**Yang, Wei

**MEMBER (committee member):**Bonesteel, N. E.

**MEMBER (committee member):**Chiorescu, Irinel

**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 (102 pages)

**ABSTRACT:**The dissertation presents the recent development of the third-generation femtosecond electron diffractometer in Professor Jim Cao’s group. Two techniques, femtosecond electron shadow imaging and deflectometry (FESID) and femtosecond electron diffraction (FED), were developed and applied to study ultrafast dynamics in laser-induced warm dense matter and quantum dots in real time. FESID provides both a global view and local prospect of the transient electric field, associated with laser-induced electron emission. The research activities cover two main objects: dynamics of ejected electron expansion from warm dense nanofilms and hyperthermal electron transport mechanisms in warm dense nanofilms. With FED, we measure laser-induced ultrafast structural dynamics of halide perovskite CsPbBr3 in real time. In the first project, we conduct ultrafast electron shadow imaging and deflection measurements of the laser-produced warm dense copper nanofilm. The results show that a significant number of electrons is ejected from the nanofilm, forming electron clouds of hundreds of microns on both sides of the pumped film. Furthermore, even for a thin 30-nm copper film, we find that the electron clouds develop asymmetry between the pumped front side and the rear side at the pump fluence of 4.5 J/cm2. The possible mechanisms leading to this ejected charge asymmetry and its implication are discussed. Next, we report a systematic study of the ejected charge dynamics surrounding laser produced 30-nm warm dense gold films using single-shot femtosecond electron shadow imaging and deflectometry. The results reveal a two-step dynamical process of the ejected electrons under the high pump fluence conditions: an initial emission and accumulation of a large number of electrons near the pumped surface region followed by the formation of hemispherical clouds of electrons on both sides of the film, which escape into the vacuum at a nearly isotropic and constant velocity with an unusually high kinetic energy of more than 300 eV. We also develop a model of the escaping charge distribution that not only reproduces the main features of the observed charge expansion dynamics but also allows us to extract the number of ejected electrons remaining in the cloud. In the second project, we investigate hyperthermal electron transport by single-shot measurements of warm dense gold and aluminum nanofilms using ultrafast electron shadow imaging and deflectometry. The results show a clear fluence limit of 0.26 J/cm2 and 0.83 J/cm2 for ballistic transport of nonthermal electrons for both two metals, respectively. This nonuniform heating is attributed to diffusive electrons. The last project, we have measured the ultrafast structural dynamics in halide perovskite CsPbBr3 in real time with Femtosecond electron diffraction. We observed CsPbBr3 experience significant ultrafast impulsive heating. This heating causes the CsPbBr3 to undergo an orthorhombic-to-cubic phase transition observable through FED. The photo induced phase transition occurs on the timescale of 1.1 ± 0.3 ps at fluences of 2.5 mJ/cm2.

**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):**Summer Semester 2019.

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

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

**NOTE (Advisory Committee):**Jianming Cao, Professor Directing Dissertation; Wei Yang, University Representative; Nicholas Bonesteel, Committee Member; Irinel Chiorescu, Committee Member; Edmund Myers, Committee Member.

**SUBJECT:**Physics

**DEGREE:**Doctoral

## Record number: 101

**FILENAME:**Li\_fsu\_0071E\_15467.pdf

**TITLE:**Subnational Political Competition, Policy Change and Performance

**AUTHOR:**Li, Tianfeng

**MEMBER (professor directing dissertation):**Feiock, Richard C.

**MEMBER (university representative):**Barrilleaux, Charles

**MEMBER (committee member):**Yang, Kaifeng

**MEMBER (committee member):**Berlan, David G. (David Gregory)

**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 (99 pages)

**ABSTRACT:**This dissertation contributes to the public policy literature by examining subnational political competition, policy change and performance in the context of U.S. and China. In a three paper format, this dissertation investigates different dimensions: Policy, patronage measurement, and performance. The first paper examines what factors cause states to experience both incremental and large-scale policy changes. This study argues that electoral incentives might influence the search, supply and processing of information on constituency issues, as well as the associated cognitive or institutional frictions, and thus determine the presence and variation of punctuated policies. This article develops and evaluates this claim within a systemic framework consisting of policy transparency, political institutions, and electoral incentives by analyzing the budget spending data collected from FY 1988 to FY 2008 for all 50 American states. The second paper constructs a new index to measure patronage appointment on city managers in China. The third paper investigates how the interactions of patronage appointment with political competition facing public managers in the local governments shape government performance by looking at 1,085 city mayors across 279 Chinese cities from 2002 to 2012.

**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):**Summer Semester 2019.

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

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

**NOTE (Advisory Committee):**Richard C. Feiock, Professor Directing Dissertation; Charles Barrilleaux, University Representative; Kaifeng Yang, Committee Member; David Berlan, Committee Member.

**SUBJECT:**Public administration

**DEGREE:**Doctoral

## Record number: 102

**FILENAME:**Lim\_fsu\_0071E\_15286.pdf

**TITLE:**Interpretive Leadership Skill in the Meaning-Making Nature of Nonprofit Leadership: A Constructive-Developmental Model of Leadership Development

**AUTHOR:**Lim, Sungdae

**MEMBER (professor directing dissertation):**Brower, Ralph S.

**MEMBER (university representative):**Ferris, Gerald R.

**MEMBER (committee member):**Berry, Frances Stokes

**MEMBER (committee member):**Yang, Kaifeng

**MEMBER (committee member):**Berlan, David G. (David Gregory)

**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 (147 pages)

**ABSTRACT:**This thesis elaborates and tests a model of nonprofit leadership development. Nonprofit leaders create meaning for other nonprofit participants through their activities and words and thus need to possess skills for interpreting the ongoing actions, interests, and values of various stakeholders. Because of the importance of these meaning-making activities, this study advances a model of interpretive leadership skill as an essential nonprofit leader competency with three distinctive dimensions. Interpretive leadership skill is defined as the individual leader’s ability to discover, reflect on, and coordinate the organization’s ongoing construction of reality. I also illustrate how leadership skills are articulated through three levels of development that correspond to cognitive capacity, identity formation, and leader competency. This research suggests that interpretive leadership skill arises from the nonprofit leader’s ongoing cognitive processes of developmental sensemaking, which are mediated through forming one’s identity as a leader, developing values, and engaging in leadership practice. Constructive-developmental theory of leadership (Day et al., 2009; McCauley et al., 2006; Mumford et al., 2000) underlies the model development. This template illuminates the importance and evolving nature of meaning-making leadership in nonprofits. This model is examined through multiple analytical procedures: scale development and validation of interpretive leadership skill and structural equation modeling analysis of the leadership development model. Data are drawn from a national survey of nonprofit executive directors administered by the researcher. Findings of this research support the theory building as well as suggest noteworthy implications for nonprofit-sector leadership.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Developmental Sensemaking, Expressive Value Orientaion, Interpretive Leadership Skill, Leader Identity, Leadership Practice, Nonprofit Leadership

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

**NOTE (Advisory Committee):**Ralph S. Brower, Professor Directing Dissertation; Gerald R. Ferris, University Representative; Francis S. Berry, Committee Member; Kaifeng Yang, Committee Member; David G. Berlan, Committee Member.

**SUBJECT:**Public administration

**DEGREE:**Doctoral

## Record number: 103

**FILENAME:**Loney\_fsu\_0071E\_15395.pdf

**TITLE:**Enhancing Decision-Making in Experienced Military Medics: A Case Study Intervention

**AUTHOR:**Loney, Brittany S. (Brittany Susan)

**MEMBER (professor directing dissertation):**Tenenbaum, Gershon

**MEMBER (university representative):**Panton, Lynn B. (Lynn Biship)‏

**MEMBER (committee member):**Chow, Graig Michael

**MEMBER (committee member):**Zhang, Qian

**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 (185 pages)

**ABSTRACT:**Decision-making (DM) is a critical task performed by military medics. Often split-second decisions must be made and executed in high pressure situations that tax the human system. The consequence for either making the wrong decision or executing the right decision poorly can threaten medics’ survival and the survival of those they are treating. While experience and a solid knowledge base are necessary components in the DM process, these qualities may not be sufficient. DM is strongly influenced by the medics’ schemas, and emotions and attention activate these blueprints (Tenenbaum & Razon, 2008). Because DM is greatly influenced by the aforementioned factors, we conducted a case study using three experienced United States (US) Army medics to enhance our understanding of the impacts of a 12-session intervention designed to enhance Tactical Combat Casualty Care (TC3) DM under pressure. The training program began with arousal control (AC) as the medic’s Internal Environment (i.e., emotion-memory relationship) affects the perception-cognition-action linkage, and thus each aspect of the DM process (Tenenbaum et al., 2009). Because perception and cognition are inter-related and play a critical role in DM (Tenenbaum & Razon, 2008), the intervention also included imagery-driven schema development (SD) and attention training (AT). Multiple sources of data, including both qualitative and quantitative measures were incorporated into the near and far transfer measures to provide an in-depth examination of the effectiveness of the DM training. Near transfer measures, which were assessed at four points, included baseline biometrics (e.g., HRV), imagery use, and a computer-based multi-tasking and an attention shifting task. As hypothesized, all near transfer measures increased for each medic. Far transfer measures consisted of TC3 performance ratings and interviews, resting biometrics taken pre- and post-performance, active biometrics collected during TC3 execution, appraisal-based surveys, and interviews pertaining to TC3 anticipation and attention. TC3 performance improved for two of the three medics. As expected, average resting and active HRV increased for each medic. This study supported the previously found relationship between perceived stress reactivity and higher threat appraisals, negative emotions and reduced performance satisfaction (Britton et al., 2019; Nicholls et al., 2012). Overall imagery use increased and may have exerted some influence on performance. Lastly, we found TC3 performance and evaluator-derived relevant attention frequency to be associated. Although the medics may have reduced their self-reported relevant attention, their ability to refocus upon recognition of distraction improved.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Decision-making, intervention, Mental skills, military psychology, performance psychology, Sport psychology

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

**NOTE (Advisory Committee):**Gershon Tenenbaum, Professor Directing Dissertation; Lynn Panton, University Representative; Graig Chow, Committee Member; Qian Zhang, Committee Member.

**SUBJECT:**Educational psychology

**DEGREE:**Doctoral

## Record number: 104

**FILENAME:**Lubna\_fsu\_0071E\_15247.pdf

**TITLE:**Experimental Efforts to Study the Nuclear Structure of 33P and 38Cl and a Theoretical Endeavor to Develop an Empirical Shell-Model Interaction

**AUTHOR:**Lubna, Rebeka Sultana

**MEMBER (professor co-directing dissertation):**Tabor, Samuel L.

**MEMBER (university representative):**Albrecht-Schmitt, Thomas E.

**MEMBER (committee member):**Volya, Alexander

**MEMBER (committee member):**Reina, Laura

**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 (208 pages)

**ABSTRACT:**In this thesis, the excited states $^{33}$P were populated by the $^{18}$O+$^{18}$O reaction at E$\_{lab}$=24 MeV. The GAMMASPEHRE array was used along with the Microball particle detector array to detect $\gamma$ transitions in coincidence with the charged particles emitted from the compound nucleus $^{36}$S. The use of Microball enabled the selection of the proton emission channel. It also helped in determining the position and energy of the emitted proton; which eventually helped in calculating more precise direction of the recoils to achieve better Doppler corrections. 16 new transitions and 13 new states were observed in $^{33}$P for the first time. The nearly 4$\pi$ geometry of GAMMASPEHRE allowed the measurement of $\gamma$-ray angular distributions leading to spin suggestions for many states. \\ In a separate experiment conducted at the John D. Fox laboratory in Florida State University, the higher-spin structure of $^{38}$Cl ($N = 21$) was investigated following the $^{26}$Mg($^{14}$C, $pn$) reaction at 30 and 37 MeV. The outgoing protons were detected in an $E- \Delta E$ Si telescope placed at 0$^\circ$ close to the target with a Ta beam stopper between the target and telescope. Multiple $\gamma$ rays were detected in time coincidence with the protons using an enhanced version of the FSU $\gamma$ detection array. A total of 11 new $\gamma$ transitions and 6 new states were reported for the first time. DCO ratio analysis and measurement of polarization asymmetry for the emitted $\gamma$ transitions were performed to assign spins and parities to a number of states. The level scheme was extended up to 8420 keV with a likely spin of 10 $\hbar$. \\ A new empirical shell model interaction was developed in the $spsdfp$ model space. This FSU interaction was built by fitting to the energies of 270 experimental states from $^{13}$C to $^{51}$Ti. Calculations using the FSU interaction reproduced observed energy states of $^{33}$P and $^{38}$Cl rather well, including other spectroscopic properties. The interaction has been used to predict the intruder states of other $sd$-shell nuclei, along with the configurations of the nuclei belong to the Island of Inversion region of the nuclear landscape.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**May 7, 2019.

**NOTE (Keywords):**Higher spin, Intruder states, Nuclear Structure, particle hole excitation, Shell evolution, Shell model

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

**NOTE (Advisory Committee):**Samuel Tabor, Professor Co-Directing Dissertation; Vandana Tripathi, Professor Co-Directing Dissertation; Thomas Albrecht-Schmitt, University Representative; Alexander Volya, Committee Member; Laura Reina, Committee Member.

**SUBJECT:**Nuclear physics

**DEGREE:**Doctoral

## Record number: 105

**FILENAME:**Lung\_fsu\_0071E\_15134.pdf

**TITLE:**Two Studies on the Application of Machine Learning for Biomedical Big Data

**AUTHOR:**Lung, Pei-Yau

**MEMBER (professor directing dissertation):**Zhang, Jinfeng, (Statistics Professor)

**MEMBER (university representative):**Liu, Xiuwen, 1966-

**MEMBER (committee member):**Barbu, Adrian G., 1971-

**MEMBER (committee member):**Wu, Wei

**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 (61 pages)

**ABSTRACT:**Large volumes of genomic data and new scientific discoveries in biomedical research are being made every day by laboratories in both academia and industry. However, two issues severely affect the usability of so-called biomedical big data: 1) the majority of the public genomic data do not contain enough clinical information, and 2) scientific discoveries are stored in text as unstructured data. This dissertation presents two studies, which address each issue using machine learning methods, in order to maximize the usability of biomedical big data. In the first study, we infer missing clinical information using multiple gene expression data sets and a wide variety of machine learning methods. We proposed a new performance measure, Proportion of Positives which can be predicted with High accuracy (PPH), to evaluate models in term of their effectiveness in recovering data with missing clinical information. PPH estimates the percentage of data that can be recovered given a desired level of accuracy. The experiment results demonstrate the effectiveness of the predicted clinical information in downstream inference tasks. In the second study, we propose a three-stage computational method to automatically extract chemical-protein interactions (CPIs) from a given text. Our method extracts CPI-pairs and CPI-triplets from sentences; where a CPI-pair consists of a chemical compound and a protein name, and a CPI-triplet consists of a CPI-pair along with an interaction word describing their relationship. We extract a diverse set of features from sentences, which are used to build multiple machine learning models. Our models contain both simple features, which can be directly computed from sentences, and more sophisticated features derived using sentence structure analysis techniques. Our method performed the best among systems which use non-deep-learning methods, and outperformed several deep-learning-based systems in the track 5 of the BioCreative VI challenge. The features we designed in this study are informative and can be applied to other machine learning methods including deep learning.

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

**NOTE (Advisory Committee):**Jinfeng Zhang, Professor Directing Dissertation; Xiuwen Liu, University Representative; Adrian Barbu, Committee Member; Wei Wu, Committee Member.

**SUBJECT:**Mathematics

**DEGREE:**Doctoral

## Record number: 106

**FILENAME:**Lynn\_fsu\_0071N\_15444.pdf

**TITLE:**Informing Seagrass Management and Restoration along the Florida Gulf Coast through Remote Sensing and Spatiotemporal Analyses of Seagrass Distribution

**AUTHOR:**Lynn, Tyler Campbell

**MEMBER (professor directing thesis):**Lester, Sarah

**MEMBER (committee member):**Folch, David C.

**MEMBER (committee member):**Yang, Xiaojun, 1965-

**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 (47 pages)

**ABSTRACT:**Seagrasses are valued for the range of ecosystem services they provide such as nursery and adult habitat for commercially and recreationally fished species, a critical food resource for threatened species, and filtration systems for improving water quality. In Florida, seagrasses are estimated to contribute $20 billion annually in benefits to the Florida Gulf Coast (FGC) region. However, even with the numerous benefits that seagrasses have been shown to provide they are still at risk due to anthropogenic pressures. Given the established importance of and threats to seagrasses, seagrass mapping and monitoring programs in the FGC have worked to better understand and predict the patterns of seagrass decline. Traditional methods for monitoring or mapping seagrasses, such as intensive field surveys (scuba/snorkeling) or costly aerial surveys often result in inconsistencies in the data necessary to better understand the spatial and temporal dynamics of seagrasses. This project used Landsat 5 satellite imagery to classify seagrasses in the Big Bend region of the FGC using a random forest model. Four years of data over a 15 year timeframe were classified and accuracies between 78-88% were achieved for the seagrass class. Counter to the prevailing narrative of seagrass degradation throughout the Gulf coast, 291 km2 of seagrass were gained between 1996-2011, with only 116 km2 lost in this same time period. Both seagrass losses and gains were positively spatially autocorrelated. Results from this project indicate that both accurate classifications and spatiotemporal analyses can be conducted using remotely sensed data for areas with limited or inconsistent field survey data.

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

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

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

**NOTE (Keywords):**Big Bend, coastal habitat, Landsat, Random Forest

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

**NOTE (Advisory Committee):**Sarah Lester, Professor Directing Thesis; David Folch, Committee Member; Xiaojun Yang, Committee Member.

**SUBJECT:**Geography

**DEGREE:**Masters

## Record number: 107

**FILENAME:**Madden\_fsu\_0071E\_15419.pdf

**TITLE:**Examining Action Effects in Language Processing

**AUTHOR:**Madden, Julie

**MEMBER (professor directing dissertation):**Kaschak, Michael P.

**MEMBER (university representative):**Wood, Carla, (Speech-Language Pathology Professor)

**MEMBER (committee member):**Boot, Walter Richard

**MEMBER (committee member):**Conway, Paul, (Psychology Professor)

**MEMBER (committee member):**Kelley, 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 (65 pages)

**ABSTRACT:**Embodied cognition, which stresses the intertwined nature of the perceptual-motor system and cognitive processes (Willems & Francken, 2012), has been a prominent area of focus in replication failures and the broader discussion of the validity of an embodied theory of cognition. What follows is an attempt to assess the effectiveness of one of the early behavioral measures (the Action-sentence Compatibility Effect, Glenberg & Kaschak, 2002), which served as an existence proof for embodied cognition. The original task was replicated, and extended, in order to address underlying cognitive mechanisms that may play a more central role to the theory than previously thought. The role of memory and attention were directly manipulated in order to assess their impact on the magnitude of the ACE measurement. The results are discussed, giving context and insight to the task specifically, as well as what these results mean to the embodied cognition theory overall.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**embodied cognition, language processing

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

**NOTE (Advisory Committee):**Michael Kaschak, Professor Directing Dissertation; Carla Wood, University Representative; Walter Boot, Committee Member; Paul Conway, Committee Member; Colleen Kelley, Committee Member.

**SUBJECT:**Cognitive psychology

**DEGREE:**Doctoral

## Record number: 108

**FILENAME:**Makhanova\_fsu\_0071E\_15293.pdf

**TITLE:**Inflammation during Marital Conflict

**AUTHOR:**Makhanova, Anastasia

**MEMBER (professor directing dissertation):**McNulty, James

**MEMBER (university representative):**Fincham, Frank D.

**MEMBER (committee member):**Maner, Jon K.

**MEMBER (committee member):**Plant, Ashby

**MEMBER (committee member):**Eckel, Lisa A.

**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 (65 pages)

**ABSTRACT:**Relationship conflict is a stressful experience for couples and stress can disrupt the balance within the immune system. In particular, stressful experiences tend to be linked with an upregulation of cytokines. In this study, I examined whether being the target of oppositional behavior from one’s partner during a conflict interaction—a factor that is linked with greater stress during conflict—would be associated with upregulation of the cytokine interleukin-1β. Data were drawn from a sample of newlywed couples; interleukin-1β was assayed from saliva samples collected before and after four conflict interactions. This study extends the literature in three meaningful ways: (1) analyses differentiated between third-party observers’ assessments of partner oppositional behavior and individuals’ perceptions of partner oppositional behavior, (2) effects of the discrete conflict observed in the lab were isolated by accounting for critical covariates that indicate greater relationship conflict more generally, and (3) moderation analyses tested whether individual differences associated with greater sensitivity to conflict exacerbated the association between partner oppositional behavior and post-conflict interleukin-1β. Overall, the results largely did not support my hypotheses. However, an effect in the opposite direction to my predictions emerged: individuals with high self-esteem, compared to those with low self-esteem, experienced greater cytokine upregulation when they perceived partner opposition. There was also a trend for men to experience greater upregulation than women when perceiving partner opposition. Findings are discussed in light of differences in cytokine measurement between the current study which assessed interleukin-1β in saliva and past research which focused on assessments of other cytokines in plasma. Overall, findings highlight the importance of examining perceptions and individual difference variables when examining links between relationship conflict and health.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**May 21, 2019.

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

**NOTE (Advisory Committee):**James K. McNulty, Professor Directing Dissertation; Francis D. Fincham, University Representative; Jon K. Maner, Committee Member; E. Ashby Plant, Committee Member; Lisa A. Eckel, Committee Member.

**SUBJECT:**Social psychology

**DEGREE:**Doctoral

## Record number: 109

**FILENAME:**Maradzike\_fsu\_0071E\_15349.pdf

**TITLE:**Development and Application of the Variational Two-Electron Reduced Density Matrix Complete Active Space Self-Consistent Field Method to Address the Electron Correlation Problem in Quantum Chemistry

**AUTHOR:**Maradzike, Elvis

**MEMBER (professor directing dissertation):**DePrince, A. Eugene, III

**MEMBER (university representative):**Bertram, R. (Richard)

**MEMBER (committee member):**Steinbock, Oliver

**MEMBER (committee member):**Yang, Wei

**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 (142 pages)

**ABSTRACT:**The goal of this dissertation is to describe a series of developments and applications of the variational two-electron reduced density matrix (v2RDM-) complete active space self-consistent field (CASSCF) method to the electron correlation problem in electronic structure theory. The v2RDM-CASSCF method is a complete active space (CAS) method based on optimizing the two-electron reduced density matrix (2RDM). Since the 2RDM is a more compact object than the $N$-electron wavefunction, it is possible to formulate a CAS approach that scales polynomially, rather than exponentially, with respect to the size of the active space. For this reason, computer implementations of v2RDM-driven CASSCF are capable of treating active spaces much larger than the limit of current implementations of wavefunction-/configuration interaction (CI-) driven wavefunction CASSCF. The work described in this dissertation addresses three deficiencies of v2RDM-CASSCF: the lack of an analytic energy derivative code, the lack of an efficient code with which to compute excited states, and the lack of a method with which to correct the v2RDM-CASSCF energy for dynamical correlation. We develop analytic first derivatives of the v2RDM-CASSCF energy, and we show, in fact, that the expressions for the analytic first derivative of the energy are identical to those for CI-based CASSCF. For the excited state problem, we improve an approach by which excited states and excited state properties can be computed from the ground state 2RDM. Lastly, we develop a model for dynamical correlation for v2RDM-CASSCF references. With this model, energies computed at the v2RDM-CASSCF level of theory can be corrected to account for the effects of dynamical correlation.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**chemistry, electronic structure theory, quantum

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

**NOTE (Advisory Committee):**A. Eugene DePrince, III, Professor Directing Dissertation; Richard Bertram, University Representative; Oliver Steinbock, Committee Member; Wei Yang, Committee Member.

**SUBJECT:**Chemistry, Physical and theoretical

**DEGREE:**Doctoral

## Record number: 110

**FILENAME:**Marzano\_fsu\_0071N\_15211.pdf

**TITLE:**Human Pluripotent Stem Cells on Cellular Behaviors of Isogenic Corticalspheroids

**AUTHOR:**Marzano, Mark Cole

**MEMBER (professor directing thesis):**Li, Yan

**MEMBER (committee member):**Ma, Teng, -2019

**MEMBER (committee member):**Guan, Jingjiao

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**Differentialeffects of Extracellular Vesicles of Lineage-Specific

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

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

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

**ABSTRACT:**Extracellular vesicles (EVs) or exosomes are responsible for a variety of signaling processes and overall physiological and pathological states of stem cells and tissues. Human induced pluripotent stem cells (hiPSCs) have unique characteristics that can mimic embryonic tissue development. EVs derived from hiPSCs can be used as therapeutics, biomarkers, and drug delivery vehicles. One issue is that little is known about the characteristics of secreted EVs/exosomes by hiPSCs during tissue morphogenesis due to paracrine signaling. In this study, EVs derived from hiPSC-derived neural progenitors (ectoderm), hiPSC-derived cardiac cells (mesoderm), and the undifferentiated hiPSCs (healthy iPSK3 and Alzheimer’s associated SY-UBH lines) were analyzed. Nanoparticle tracking analysis and electron microscopy results showed that the derived EVs had the average size of 100-250 nm. Western blot revealed that exosomal markers ALIX, CD63, and TSG 101 were expressed in the derived EVs. miRNAs including miR-133 and miR-155 were differently expressed in different EV groups. Treating the cortical spheroids with different EVs in vitro showed the differential abilities of increasing cell proliferation (indicated by BrdU assay) and axonal growth (indicated by β-tubulin III staining). For the Aβ42 oligomer treated cultures, the derived EVs increased cell viability and reduced oxidative stress differentially, showing neural protective ability. This study should advance our understanding of cell-cell communications in stem cell microenvironment and provide possible therapeutic options for treating neural degeneration.

**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 5, 2019.

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

**NOTE (Advisory Committee):**Yan Li, Professor Directing Thesis; TengMa, Committee Member; Jingjiao Guan, Committee Member.

**SUBJECT:**Biomedical engineering

**SUBJECT:**Engineering

**SUBJECT:**Biology

**DEGREE:**Masters

## Record number: 111

**FILENAME:**Maynard\_fsu\_0071E\_15302.pdf

**TITLE:**A Curriculum Delivered, a Curriculum Remembered: An Alumni Study of an Undergraduate Concentration in Writing and Rhetoric

**AUTHOR:**Maynard, Travis

**MEMBER (professor directing dissertation):**Yancey, Kathleen Blake, 1950-

**MEMBER (university representative):**Dennen, Vanessa P., 1970-

**MEMBER (committee member):**Neal, Michael R.

**MEMBER (committee member):**Graban, Tarez Samra

**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 (294 pages)

**ABSTRACT:**This dissertation explores the impact and influence of undergraduate major programs in writing and rhetoric on the lives of their students through an alumni study of the Editing, Writing, and Media (EWM) major at Florida State University. Building on prior alumni studies in the field of Rhetoric and Composition, this study captures a capacious portrait of alumni lives prior to, during, and after their time within the EWM program. Framing this portrait is Kathleen Blakey Yancey’s three-part curricular framework of the delivered curriculum (the institutional materials that instantiate a course of study), lived curriculum (students’ prior knowledge and experience they draw upon in a course or program) , and experienced curriculum (a student’s unique set of experiences in a major program). In order to account for alumni lives following graduation, this project theorizes a fourth curriculum known as the remembered, comprised of the elements of a student’s experienced curriculum that influence their subsequent lives of alumni. Three questions guide this study: 1) How do alumni retrospectively perceive their experience and knowledge prior to enrolling in a major program as influencing their experiences in an undergraduate writing major? 2) What elements of an undergraduate major curriculum do alumni perceive and report as contributors to their lives after graduation? 3) How do alumni of this undergraduate writing major perceive and report the influence of their experiences in an undergraduate writing major on their lives after graduation? To address these research questions, the study relies on an alumni survey and three interview case studies, with each case study containing two mapping activities. The survey collects demographic information from EWM alumni, alongside their reasons for enrolling in the major (lived curriculum), their perceptions of their learning within the EWM program (experienced curriculum), their academic and professional experiences following graduation, current writing tasks, perceptions of how the EWM program has influenced those experiences, and perceptions of how well the EWM program prepared them to meet the program’s outcomes (remembered curriculum). The interview protocol asks alumni to create two maps of their a) experiences at Florida State University and b) current writing tasks, and document their perceived connections among the elements within each map; after alumni the complete those maps, I ask them semistructured interview questions about their perceived relationships between and among their lived and experienced curricula and how they influence the remembered curricula in their current lives. The data generated by the survey and case studies provide insight into the lived, experienced, and remembered curricula of EWM alumni. The lived curriculum is most prominently defined by two factors: first, alumni’s prior writing experiences, and second, their aspirations to pursue careers related to writing. Alumni cite structured writing environments like courses and/or co-curricular activities and self-sponsored writing tasks like fiction and/or blogging as both leading them to enroll in the program and shaping their course projects. Further, a large portion of alumni believe the EWM program would prepare them to write within professional environments including but not limited to the publishing industry. The experienced curriculum shows that alumni benefit from the gateway courses of Writing and Editing in Print and Online (WEPO) and Rhetoric and their required internship, as these experiences prepare them to compose rhetorical texts for a variety of contexts and within multiple genres. However, alumni feel they were less prepared to engage with the visual dimensions of composing and work within advanced composing technologies. Additionally, alumni consistently rely on a sense of pragmatism to identify elements of the EWM program that they retrospectively value, frequently benefitting from experiences they are able to adapt into their own writing. The remembered curriculum shows that the EWM program prepares alumni to enter into a range of academic and professional opportunities, with 40% entering postgraduate study and 93.7% finding employment following graduation; alumni consistently feel the EWM program positively influences these experiences. Personal and professional writing are the most frequent types of writing alumni complete, with 78% completing some form of self-sponsored writing and 70% writing more than ten hours a week for their occupations. In describing their current writing processes, alumni exhibit varying degrees of rhetorical awareness, with their explanations tethered to concepts such as context, audience, and genre guiding their rhetorical decision-making processes. Together, these results illustrate the influence of alumni’s prior writing on their rhetorical education within undergraduate majors, emphasize the importance of praxis for alums’ experienced curricula, and exhibit the varying ways in which undergraduate major programs can influence the writing lives of its alumni.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**June 14, 2019.

**NOTE (Keywords):**Alumni Study, Rhetoric and Composition, Undergraduate Majors, Writing and Rhetoric

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

**NOTE (Advisory Committee):**Kathleen Blake Yancey, Professor Directing Dissertation; Vanessa Paz Dennen, University Representative; Michael Neal, Committee Member; Tarez Samra Graban, Committee Member.

**SUBJECT:**Rhetoric

**DEGREE:**Doctoral

## Record number: 112

**FILENAME:**McCrea\_fsu\_0071N\_15372.pdf

**TITLE:**Availability of Information on the Web Regarding National Roster Music Therapy Internships: A Content Analysis

**AUTHOR:**McCrea, Casie Rose

**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 (55 pages)

**ABSTRACT:**Music therapy is a rapidly growing allied health profession. In order to become a board-certified music therapist (MT-BC), one must complete a college degree program approved by the American Music Therapy Association, which includes an AMTA approved program of study and a six-month internship under the supervision of an MT-BC in good standing with the Certification Board of Music Therapy. This study focused on the six-month internship aspect of training. A content analysis was conducted to determine what information is available on the web to aid prospective music therapy interns in deciding where they will apply, and to aid internship sites to receive applicants who are likely to fit well with the existing program. A web search was conducted using the National Roster Internship link found on the “Education and Careers” tab of the American Music Therapy Association website, which yielded 64 results (N=64). Of the sample (N=64), 52 sites were active and 12 were inactive, 31 had a website/tab/link, and 33 did not. Additionally, five internship sites had a Facebook page. Twenty-nine (45.3%) of the National Roster Internship sites did not have information available on the web to be assessed, meaning (n=35) internship sites remained for consideration in data collection. A total of 15 categories of information were assessed for all websites included in the analysis, and “music therapy” was the only category investigated listed consistently across 100% of all websites. The lack of consistent information may inhibit accurate internship comparisons for students as they seek information about internship placements.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**June 14, 2019.

**NOTE (Keywords):**Availability, Internet, Internship, Music, Therapy, Web

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

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

**DEGREE:**Masters

## Record number: 113

**FILENAME:**McGraw\_fsu\_0071E\_15423.pdf

**TITLE:**An Investigation of Mathematics Language and Its Relation with Mathematics and Reading

**AUTHOR:**McGraw, Amanda Lee

**MEMBER (professor co-directing dissertation):**Kaschak, Michael P.

**MEMBER (university representative):**Jakubowski, Elizabeth M.

**MEMBER (professor co-directing dissertation):**Ganley, Colleen M.

**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 (61 pages)

**ABSTRACT:**Unlike mathematical ability, mathematical language consists of terminology that is necessary to understand and participate in mathematical tasks. More recently, research indicates that mathematical language is vital for mathematic performance. Research examining mathematical language may help us better understand the long-established relation between mathematical performance and literacy. Further, little is known about potential correlations of mathematical language. Here, I will examine the relation between mathematical language with socioeconomic status (SES) and math anxiety. I find that both mathematical language and reading ability predict mathematics performance, but reading ability is the stronger predictor. Finally, both socioeconomic status and math anxiety are significant predictors of mathematical language.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**language, mathematics

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

**NOTE (Advisory Committee):**Michael Kaschak, Professor Co-Directing Dissertation; Elizabeth Jakubowski, University Representative; Colleen Ganley, Professor Co-Directing Dissertation; Walter Boot, Committee Member; Chris Schatschneider, Committee Member.

**SUBJECT:**Cognitive psychology

**DEGREE:**Doctoral

## Record number: 114

**FILENAME:**McLean\_fsu\_0071E\_15178.pdf

**TITLE:**Shifting the Mental Health Gatekeeper Paradigm on University Campuses: Enhancing Social Support and Sense of Belongingness

**AUTHOR:**McLean, Kate Elizabeth

**MEMBER (professor directing dissertation):**Becker, Martin Swanbrow

**MEMBER (university representative):**Glueckauf, Robert L.

**MEMBER (committee member):**Jenkins, Lyndsay Nicole

**MEMBER (committee member):**Pfeiffer, Steven I.

**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 (166 pages)

**ABSTRACT:**The present study compared a sample of first-year university students residing in Living Learning Programs (LLPs; n = 64) with a matched-group of first-year students residing in traditional residence halls (n = 83) at a large university located in the southeastern United States. The study examined if students in LLPs experience greater belongingness, perceived social support, and mental health in comparison to peers in traditional residence halls, and if this corresponds to greater help-seeking intentions and superior RA mental health gatekeeper performance. Participants completed the Psychological Sense of School Membership Scale (PSSM; Goodenow, 1993), the Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988), the Mental Health Continuum Short-Form (Keyes, 2009a), and an RA Gatekeeper Performance and Student Help-Seeking Questionnaire that was designed by the researcher. Findings from the present study suggest that LLPs are effective for increasing the amount of social support and belongingness students’ experience in relation to their resident hall communities, but not for increasing overall or global belongingness and social support. Results also indicate that students in LLPs received more support from their RA mental health gatekeeper and exhibited greater help-seeking intentions towards RAs and resident hall peers in comparison to students in traditional residence halls. A discussion of the findings is offered in support of Wyman and colleagues’ (2008) communication model of gatekeeper training. Implications for theory, research, and practice are discussed, in addition to suggestions for future research. Keywords: living learning programs, college students, sense of belongingness, perceived social support, mental health, help-seeking intentions, mental health gatekeepers, resident assistants, RA gatekeeper training

**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):**April 17, 2019.

**NOTE (Keywords):**college students, living learning programs, mental health, perceived social support, RA gatekeeper training, sense of belongingness

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

**NOTE (Advisory Committee):**Martin Swanbrow Becker, Professor Directing Dissertation; Robert Glueckauf, University Representative; Lyndsay Jenkins, Committee Member; Steven Pfeiffer, Committee Member.

**SUBJECT:**Counseling psychology

**SUBJECT:**Social psychology

**DEGREE:**Doctoral

## Record number: 115

**FILENAME:**McLean\_fsu\_0071N\_15306.pdf

**TITLE:**A Zooarchaeological Analysis of Feasting at Grand Mound Shell Ring (8Du1), Duval County, Florida

**AUTHOR:**McLean, Emily A.

**MEMBER (professor directing thesis):**Peres, Tanya M.

**MEMBER (committee member):**Marrinan, Rochelle A.

**MEMBER (committee member):**Halligan, Jessi J.

**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 (109 pages)

**ABSTRACT:**Archaeologists have been interested in the foodways of prehistoric peoples for over half a century, leading to a plethora of analyses on diet and subsistence strategies. In the last 30 years, archaeologists have come to focus on the role of food in ideological, political, and social settings. One avenue of exploration into these relationships is through the identification of communal eating events, or feasting. In this thesis I investigate whether or not feasting events occurred at Grand Mound Shell Ring (8Du1), Duval County, Florida. To test this, I compare the faunal assemblage from three discrete deposits (nineteen units and six features) at Grand Mound Shell Ring to archaeological correlates of feasting outlined by three different models (Jackson and Scott 1995; Twiss 2008; VanDerwarker 1999; VanDerwarker et al. 2007). My analysis, based on the faunal material and limited contextual information, found it is likely that communal feasting activities took place at Grand Mound Shell Ring.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Archaeozoology, Feasting, Mississippian, Shell Ring, Zooarchaeology

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

**NOTE (Advisory Committee):**Tanya M. Peres, Professor Directing Thesis; Rochelle A. Marrinan, Committee Member; Jessi Halligan, Committee Member.

**SUBJECT:**Archaeology

**DEGREE:**Masters

## Record number: 116

**FILENAME:**McMahon\_fsu\_0071E\_15410.pdf

**TITLE:**Departmentalization in Intermediate Elementary Grade Levels and Student Performance in Mathematics

**AUTHOR:**McMahon, Paige E. (Paige Elizabeth)

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College Ofeducation

**CORPORATE NAME:**Department of Educational Leadership and PolicyStudies

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

**PHYSICAL DESCRIPTION:**1 online resource (84 pages)

**ABSTRACT:**Departmentalization is a growing trend in elementary schools nationwide due to a focus on high stakes accountability testing. In a departmentalized school, teachers specialize in one to three subject areas and students benefit from the instruction of teachers with expert knowledge in their specific areas as opposed to the traditional, self-contained elementary school model where students receive instruction in multiple subjects from one teacher. This mixed methods study sought to investigate the process of departmentalizing fourth and fifth grade classrooms, and to examine the relationship between departmentalization and student achievement growth in St. Lucie Public Schools in Florida. The study found that elementary and K-8 schools with higher poverty populations, as well as schools with lower student enrollments, were the most likely to utilize departmentalization, especially a semi-departmentalized model in the fourth grade level. Students in departmentalized classrooms showed less growth over the course of the school year. The choice to departmentalize was largely teacher-directed and assignment of specific subjects to teachers was based on teachers’ strength, comfort levels, and supporting student data. These findings are discussed and recommendations for the district are offered in the final chapter.

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

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

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

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

**SUBJECT:**School management and organization

**DEGREE:**Doctoral

## Record number: 117

**FILENAME:**Miller\_fsu\_0071E\_15337.pdf

**TITLE:**The Impact of a Career Course on Undergraduate Students' Career Decision State as a Function of Negative Career Thoughts

**AUTHOR:**Miller, Adam K. (Adam Kyle)

**MEMBER (professor co-directing dissertation):**Osborn, Debra S., 1968-

**MEMBER (professor co-directing dissertation):**Sampson, James P.

**MEMBER (university representative):**Guthrie, Kathy L.

**MEMBER (committee member):**Lenz, Janet G., 1953-

**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 (163 pages)

**ABSTRACT:**The current study examined the impact of taking a career development course on career decision making. Specifically, this study sought to determine when students are likely to see the greatest changes in career decision state, as well as how students’ negative career thinking can impact such changes. The sample consisted of 151 undergraduate students participating in a career course that was theoretically informed by cognitive information processing (CIP; Sampson, Reardon, Peterson, & Lenz, 2004). The Career State Inventory (CSI; Leierer, Peterson, Reardon, & Osborn, 2017) was used to measure students’ career decision state throughout each unit of the course, while the Career Thoughts Inventory (CTI; Sampson et al., 1996a) was used as a measure of negative career thinking. A repeated-measures ANOVA was performed to determine differences in course impact by level of negative career thinking (high, medium, low). Results of the ANOVA analysis found that students reported significantly more positive career decision states following Unit I and Unit III of the course, but not Unit II of the course. Additionally, results from that same analysis found an interaction effect between the course and negative career thinking; indicating that students with higher levels of negative career thinking started and maintained less positive career decisions states throughout the course, compared to those of medium and lower levels of negative career thinking. Finally, a second repeated-measures ANOVA found that students who saw the greatest decrease in negative career thinking throughout the course also saw the greatest changes towards a more positive career decision state. A discussion of the findings is offered, followed by the study’s limitations, and the implications for theory, research, practice, and policy.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Career Course, Career Decision State, Career Development, Career Development Course, Cognitive Information Processing, Negative Career Thoughts

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

**NOTE (Advisory Committee):**Debra Osborn, Professor Co-Directing Dissertation; James P. Sampson, Jr., Professor Co-Directing Dissertation; Kathy Guthrie, University Representative; Janet Lenz, Committee Member.

**SUBJECT:**Counseling psychology

**DEGREE:**Doctoral

## Record number: 118

**FILENAME:**Minor\_fsu\_0071E\_15303.pdf

**TITLE:**Flowers as Mind Control

**AUTHOR:**Minor, Laura L.

**MEMBER (professor directing dissertation):**Belieu, Erin, 1965-

**MEMBER (committee member):**Kimbrell, James, 1967-

**MEMBER (committee member):**Epstein, Andrew, 1969-

**MEMBER (committee member):**Galeano, Juan Carlos, 1958-

**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 (64 pages)

**ABSTRACT:**"Flowers as Mind Control" is a debut collection of poems that mixes the Welsh notion of Hiraeth and memories with a fiery, insatiable need to "power through." It also blends narrative elements with lyric ones. Here I try for a raw edge that's an outlaw perspective beyond many first collections, but the selvage is also softened by empathy in the face of humanity's tryst with failure and trauma. Collectively, the poems in this dissertation articulate the social anxieties of entering the middle of one's life, accepting them, but specifically as a woman who values truth and beauty as parallel to the complicated nexus of romantic and feminist in a world that rarely values the "duende" in any of them. From this perspective, the speaker weaves humor, grief, loss, and gratitude as witnesses along the way, ending in a supplication of endurance. Drawing inspirational structure from the slim volumes of Pablo Neruda's Twenty Love Poems & A Song of Despair or Deborah Digges' Vesper Sparrows, this collection, once voluminous and sprawling, is now a concise book of lyrical prayers to survival. These poems explore new ground in how they make fun of, or subvert the idea of the person being held back or propelled through nature which is often atavistic, corrosive, or unfiltered in its foggy contempt for the artist. This collection proves powerful ownership in the face of uncertainty and a respectful certainty in one's own ability to heal and change.

**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 2, 2019.

**NOTE (Keywords):**Control, Flowers, Laura, Mind, Minor, Poetry

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

**NOTE (Advisory Committee):**Erin Belieu, Professor Directing Dissertation; James Kimbrell, Committee Member; Andrew Epstein, Committee Member; Juan Carlos Galeano, Committee Member.

**SUBJECT:**Literature

**DEGREE:**Doctoral

## Record number: 119

**FILENAME:**Mookerjee\_fsu\_0071E\_15371.pdf

**TITLE:**Cravings in the Caribbean: Women, Food, and Desire in Contemporary Literature

**AUTHOR:**Mookerjee, Rita

**MEMBER (university representative):**Upchurch, Charles, 1969-

**MEMBER (committee member):**Ward, Candace

**MEMBER (committee member):**Ribo, John

**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 (108 pages)

**ABSTRACT:**Though many scholars have already remarked upon the Caribbean as a site of cultural and culinary convergence, this study specifically addresses the role of women, desire, and food within literature of the region. Existing research on these topics tends to focus on the phenomenology of events within Caribbean history. Scholars have noted the function of food in nation-building, the impact of plantation economics across the islands, and the symbolic power of edible commodities in the region, but few employ a gendered lens to examine the intersections of these areas. My research illustrates how postcolonial female subjects are inextricable from edible commodities cultivated in the Caribbean and how women writers such as Edwidge Danticat, Shani Mootoo, and Pauline Melville have made use of this property in contemporary literature as a means of reclaiming history and shaping identity. This project will analyze novels and short stories with feminist postcolonial theory and historiographic research as a framework. My dissertation is informed by notions of “eating the Other” as articulated by bell hooks as well as Valérie Loichot's The Tropics Bite Back: Culinary Coups in Caribbean Literature. Additionally, Racial Indigestion: Eating Bodies in the nineteenth Century by Kyla Wazana Tompkins shapes my understanding of gender and edibility. I situate my research within the larger field of critical eating studies as defined by Tompkins. The function of critical eating studies is to show the politicized nature of eating as well as the overlap between the fetishization of food objects, racial minorities, and women. My dissertation project is unique in its focus on the specific contributions of living Caribbean women authors. While my work draws from history and cultural studies, it remains rooted in literary scholarship. I understand literature as the space where lost narratives can be excavated, resurfaced, and re-presented to ultimately enrich our understanding of writing and history. The structure of my inquiry is built upon three intersections of women, desire, and food. First, the enslaved female body has been a site of colonial rule and exploitation. In history and literature, brown and black women are often likened to sugar, coffee and cacao – all edible commodities that periodically served as the impetus for the colonization of the islands of the Caribbean and the nation states that subsequently formed. I show the impact of this association on Caribbean labor and national identity construction in the second chapter. Namely, I unpack the paradox of domestic laborers in that many Caribbean women must work in the service of families and bodies that are not their own. The next chapter highlights the role of bricolage in making sense of trauma and fractured identity. In my fourth chapter, I show the impact of tourism on women using Here Comes the Sun by Nicole Dennis-Benn. In the final chapter, I inspect how prescribed gender roles are subverted by Caribbean women and how sensation and spectacle work as means of empowerment and self-actualization.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Food, Power, Sex, Women

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

**NOTE (Advisory Committee):**Robin Truth Goodman, Professor Directing Dissertation; Charles Upchurch, University Representative; S. Candace Ward, Committee Member; John Rib, Committee Member.

**SUBJECT:**Literature

**SUBJECT:**Women's studies

**SUBJECT:**Caribbean literature

**DEGREE:**Doctoral

## Record number: 120

**FILENAME:**Morris\_fsu\_0071N\_15300.pdf

**TITLE:**Cognitive and Motivational Processes Underlying ADHD and Early Academic Skills in Preschool Children: Are the Processes Distinct?

**AUTHOR:**Morris, Brittany M.

**MEMBER (professor directing thesis):**Lonigan, Christopher J.

**MEMBER (committee member):**Meyer, Alexandria

**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 (67 pages)

**ABSTRACT:**The dual-pathway model (Sonuga-Barke, 2002, 2003) proposes Attention-Deficit/Hyperactivity Disorder (ADHD) develops along two distinct but interrelated developmental pathways, a cognitive pathway of inhibitory control (IC) deficits and a delay-aversion pathway (i.e., hypersensitivity to delay). Studies suggest delay-of-gratification (DG) tasks tap both components of the dual-pathway model, and, therefore, it is unclear whether IC, DG, and delay-aversion tasks are measuring distinct constructs. The purpose of this study was to investigate the dimensionality of the constructs underlying the dual-pathway model and their differential impacts on ADHD symptomology and early academic skills in preschool-age children. Results of confirmatory factor analyses of data from 163 preschool children (49% female; mean age 55.42 months, SD = 8.42) indicated that measures of IC, DG, and delay-aversion were best conceptualized as two factors, rather than three distinct constructs. Specifically, IC and DG tasks were best represented as a single factor, and Delay-Aversion was a distinct factor. Although the IC + DG factor was significantly related to both teacher report of ADHD symptoms and early academic skills, the Delay-Aversion factor was not. In contrast to predictions based on the dual-pathway model, ADHD symptoms did not mediate the relation between the IC + DG factor and early academic skills. Overall, although results of this study indicate that delay-aversion tasks sufficiently reduce the influence of IC, the lack of association between delay-aversion and both ADHD symptomology and early academic skills makes it unclear what delay-aversion tasks are measuring. Taken together, this study highlights possible limitations in the applicability of the dual-pathway model, particularly in preschool-age populations.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**June 14, 2019.

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

**NOTE (Advisory Committee):**Christopher J. Lonigan, Professor Directing Thesis; Alexandria Meyer, Committee Member; Michael P. Kaschak, Committee Member.

**SUBJECT:**Clinical psychology

**SUBJECT:**Educational psychology

**DEGREE:**Masters

## Record number: 121

**FILENAME:**Muchira\_fsu\_0071E\_15245.pdf

**TITLE:**Predictors of Students' Entrepreneurial Self-Efficacy in Kenyan Secondary Schools: Do Business Studies Matter?

**AUTHOR:**Muchira, John M. (John Munyui)

**MEMBER (professor co-directing dissertation):**Zuilkowski, Stephanie Simmons

**MEMBER (professor co-directing dissertation):**Lamont, Bruce T.

**MEMBER (university representative):**Doan, Petra L., 1955-

**MEMBER (committee member):**Iatarola, Patrice

**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:**The unemployment rate is very high in Kenya, with approximately 25% of the youth between the ages of 15 and 25 being currently unemployed (GOK, 2007). Some entrepreneurship education scholars believe that entrepreneurship education can alleviate the problem of high unemployment among the Kenyan youth. However, we do know other factors are likely to influence students’ decisions of starting their own business. The influence of entrepreneurship education as well as other factors known to affect entrepreneurial self-efficacy (ESE) is, however, under-researched at the secondary level in Kenya. The current study therefore employs quantitative methods in examining how students’ business education exposure influences their ESE controlling for tribe/ethnic culture, family entrepreneurship history, prior entrepreneurship experience, family socio-economic status (SES), the type of school the students are attending, and their gender, as well as the extent at which family SES and gender moderate the influence of business studies education on ESE.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**May 6, 2019.

**NOTE (Keywords):**entrepreneurial intention, entrepreneurial self-efficacy, entrepreneurship mindset, experiential learning

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

**NOTE (Advisory Committee):**Stephanie S. Zuilkowski, Professor Co-Directing Dissertation; Bruce T. Lamont, Professor Co-Directing Dissertation; Petra L. Doan, University Representative; Patrice Iatarola, Committee Member.

**SUBJECT:**Educational evaluation

**SUBJECT:**Entrepreneurship

**SUBJECT:**Curriculum planning

**DEGREE:**Doctoral

## Record number: 122

**FILENAME:**Mulligan\_fsu\_0071N\_15436.pdf

**TITLE:**Reward Sensitivity and Stress as Predictors of Antenatal Depression

**AUTHOR:**Mulligan, Elizabeth M.

**MEMBER (professor directing thesis):**Proudfit, Greg Hajcak

**MEMBER (committee member):**Meyer, Alexandria

**MEMBER (committee member):**Eckel, Lisa A.

**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 (45 pages)

**ABSTRACT:**Recent research suggests that stress and reward insensitivity may interact to confer risk for Major Depressive Disorder (MDD). However, no study has yet examined stress and reward sensitivity, and their interaction, in the context of risk for antenatal depression (i.e., depression in pregnancy). The present study is the first study to examine whether the neural response to reward (i.e., the Reward Positivity, or RewP), stress exposure as indexed by hair cortisol and self-report, and their interaction, are associated with antenatal depressive symptoms and/or categorical diagnoses of MDD, above and beyond self-report measures of psychosocial risk for perinatal depression. To this end, the present study examined cross-sectional associations between biological and psychosocial measures obtained in pregnancy, such as RewP amplitude, hair cortisol concentration, self-reported psychosocial risk factors (i.e., past major depressive episodes (MDE) and scores on a psychosocial risk factor questionnaire), and concurrent depressive symptoms and diagnoses. While the RewP was unrelated to stress exposure and to continuous depressive symptoms, and stress did not moderate associations between the RewP and continuous or categorical depression, associations were revealed between stress exposure and continuous depression, as well as between the RewP and categorical depression. Furthermore, the RewP and scores on self-report measure of common psychosocial risk factors for perinatal depression were identified in a logistic regression as independent predictors of antenatal diagnoses of MDD, and together predicted 37 percent of the variance in likelihood of MDD diagnosis. The present study provides novel evidence that the RewP is associated with MDD diagnoses in women in the antenatal period and highlights the need for further research investigating the RewP as a prospective predictor of risk for perinatal increases in depression.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**antenatal depression, EEG, event-related potentials, hair cortisol, reward positivity, stress

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

**NOTE (Advisory Committee):**Greg Hajcak, Professor Directing Thesis; Alexandria Meyer, Committee Member; Lisa Eckel, Committee Member.

**SUBJECT:**Psychology

**SUBJECT:**Endocrinology

**SUBJECT:**Neurosciences

**DEGREE:**Masters

## Record number: 123

**FILENAME:**MusacchioSchafer\_fsu\_0071N\_15193.pdf

**TITLE:**The Status of Suicidality Prediction Research: A Meta-Analysis

**AUTHOR:**Musacchio Schafer, Katherine

**MEMBER (professor directing thesis):**Franklin, Joseph

**MEMBER (committee member):**Joiner, Thomas, Jr.

**MEMBER (committee member):**Wagner, Richard K.

**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 (41 pages)

**ABSTRACT:**Theories of suicidal thoughts and behaviors (STBs) have long guided treatment and prevention efforts. Meta-analytic investigation into general risk factors, psychopathology, and STB related clinical instruments indicated chance level prediction, and some researchers have suggested that a shift toward a machine learning approach would yield superior STB prediction. Thus, I conducted a meta-analysis of traditional theories and machine learning models to estimate and compare respective accuracy. I searched PsycInfo, PubMed, and GoogleScholar for studies using at least one theoretically relevant construct or machine learning model associated with suicide ideation, attempt, or death. This yielded 224 traditional (from 142 papers) and 14 machine learning (from 10 papers) effect sizes. Prediction from constructs related to traditional theories was consistent with previous meta-analytic work indicating weak, inaccurate prediction. No particular theory was particularly accurate in prediction of STB outcomes. Machine learning models demonstrated substantially more accurate association with STB outcomes, although these data are few in numbers. This work demonstrated that STB theories have largely not been directly tested in the extant literature and that moderators of machine learning models are largely unclear. Future studies are needed to directly test STB theories in order to stringently test these ideas. More machine learning studies are needed to investigate characteristics of extremely accurate models.

**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 10, 2019.

**NOTE (Keywords):**suicidal, suicide, suicide attempts, suicide death, suicide ideation, theories

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

**NOTE (Advisory Committee):**Joseph C. Franklin, Professor Directing Thesis; Thomas Joiner, Committee Member; Rick Wagner, Committee Member.

**SUBJECT:**Clinical psychology

**DEGREE:**Masters

## Record number: 124

**FILENAME:**Neal\_fsu\_0071E\_14927.pdf

**TITLE:**A Matter of Policy: Experiments in Bureaucracy, Insurance, and Monetary Economics

**AUTHOR:**Neal, Daniel R.

**MEMBER (professor directing dissertation):**Isaac, R. Mark (Robert Mark), 1954-

**MEMBER (university representative):**Großer, Jens W.

**MEMBER (committee member):**Cooper, David J.

**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 (88 pages)

**ABSTRACT:**This dissertation is a collection of essays that employ experimental economic methodology in a variety of settings to address important uses of microeconomic and macroeconomic public policy. Chapter 1 serves as a forward to the remaining chapters. It highlights the importance of experimental economics to policy decisions and its unique place in the overall field of economics. Chapter 2 of this dissertation explores the influence of the ratchet effect on a bureaucracy's expansion and the resulting consequences. To examine the individual effects of adverse selection and moral hazard, Chapter 3 uses an experimental method to study how asymmetric information affects individual behavior when insurance is present. Finally, Chapter 4 addresses the claim that money is neutral and its arbitrary injection into a market has no distributional effects. Throughout this dissertation, experimental economic methodologies will be employed in an array of economic fields demonstrating the broad applicability of experimental economics.

**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):**Summer Semester 2019.

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

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

**NOTE (Advisory Committee):**Robert Mark Isaac, Professor Directing Dissertation; Jens Großer, University Representative; David Cooper, Committee Member; Luke Boosey, Committee Member.

**SUBJECT:**Economics

**DEGREE:**Doctoral

## Record number: 125

**FILENAME:**Nguyen\_fsu\_0071E\_15140.pdf

**TITLE:**Design and Fabrication of Carbon Nanotube-Based Multifunctional Composites and Advanced Sensors for Composites Manufacturing

**AUTHOR:**Nguyen, Nam Nhu

**MEMBER (professor directing dissertation):**Liang, Zhiyong (Richard)

**MEMBER (university representative):**Yeboah, Yaw D.

**MEMBER (committee member):**Okoli, Okenwa O. I.

**MEMBER (committee member):**Zeng, Changchun (Chad)

**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 (106 pages)

**ABSTRACT:**Polymer matrix composites are increasingly used in aerospace applications due to their high specific properties. Recently, wide application of composite materials leads to extensive research in improving manufacturing processes to increase production quality as well as potentially reduce cost. In addition, adding new functionality such as sensing, communication, lightning strike protection into composite structures to make multifunctional composites has gained more and more interests. Incorporation of functionalities triggers the development of integration technologies as well as innovate manufacturing approaches such as 3D printing or additive manufacturing. In this research, the design and fabrication of multifunctional composites by using different techniques including in-situ curing, 3D printing, and printed sensor network on composite structures are studied. In-situ curing in CNT/CF hybrid composites is presented in this work as an effective technique to manufacture multifunctional composites. By passing electrical current through highly conductive CNT layers, composite is fully cured by heat generated from CNT layers. FEM simulation is used to demonstrate uniformity of composite temperature which was in good agreement with the experiment result. In addition, 3D printing of functional ink using graphite nanoplatelets and milled carbon fiber is discussed. We successfully formulated conductive ink with thermal conductivity of 2W/mK and a density of 1.21 g/cm3. This research also introduced a new way of fabricating lightweight heat sink for thermal management by a combination of 3D printing technology with carbon nanotube sheet. Our heat sink offered effective thermal performance and extremely lightweight. Results indicate that the techniques are effective ways to transfer the properties of CNT sheets into lightweight thermal devices for thermal management applications. Furthermore, this work demonstrated feasibility and preliminary results of a fully printed wireless sensor that can potentially operate, monitor and transfer high quality of signal such as a change in relative permittivity. The sensors can effectively detect the change in permittivity of the environment Printed wireless sensor could open cost-effective and efficient way to monitor the large composite structure or manufacturing process.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**3d printing, carbon nanotube, heat transfer, printed sensor, thermal management, wireless sensor

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

**NOTE (Advisory Committee):**Zhiyong Richard Liang, Professor Directing Dissertation; Yaw Yeboah, University Representative; Okenwa Okoli, Committee Member; Changchun Chad Zeng, Committee Member.

**SUBJECT:**Materials science

**DEGREE:**Doctoral

## Record number: 126

**FILENAME:**Noakes\_fsu\_0071N\_15449.pdf

**TITLE:**Investigating the Interaction of Sleep and Alcohol

**AUTHOR:**Noakes, Eric J. (Eric Joseph)

**MEMBER (professor directing thesis):**Lyons, Lisa C.

**MEMBER (committee member):**Arbeitman, Michelle N. (Michelle Nina)

**MEMBER (committee member):**Houpt, Thomas A.

**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 (56 pages)

**ABSTRACT:**Alcohol abuse is more prevalent in populations in which sleep deprivation is more common including shift workers and older individuals. While much research has investigated the impact of alcohol use and abuse on sleep quality, little is known about the role of sleep in alcohol sensitivity and toxicity. Using Drosophila melanogaster, a well-established model for sleep and alcohol studies, I investigated the modulating effect of sleep on alcohol sensitivity, toxicity, and tolerance. Mechanical sleep deprivation increased alcohol sensitivity and alcohol-induced mortality following an acute binge-like exposure to alcohol. Genetically sleep deficient flies exhibited increased alcohol-induced mortality which accumulated with age, but not increased alcohol sensitivity. Conversely, pharmacologically increasing sleep protects against the toxic effects of alcohol. Sleep deprivation blunted long-term but not short-term functional alcohol tolerance. Finally, sleep deprivation, alcohol exposure, and the combination of sleep deprivation and alcohol exposure induce both distinct and overlapping changes in gene expression. Taken together, the results of this study suggest that sleep modulates alcohol toxicity and impacts functional alcohol tolerance. This study lays the foundation for a future in-depth investigation of potential mechanisms governing the interaction of sleep and alcohol.

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

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

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

**NOTE (Keywords):**Alcohol, Drosophila, Sleep

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

**NOTE (Advisory Committee):**Lisa C. Lyons, Professor Directing Thesis; Michelle N. Arbeitman, Committee Member; Thomas A. Houpt, Committee Member; Wu-Min Deng, Committee Member.

**SUBJECT:**Neurosciences

**SUBJECT:**Biology

**DEGREE:**Masters

## Record number: 127

**FILENAME:**OMalley\_fsu\_0071E\_15227.pdf

**TITLE:**The Importance of the Principal/Teacher Relationship in West African International Schools in Countries with Instability

**AUTHOR:**O'Malley, James E. (James Edward)

**MEMBER (professor directing dissertation):**Preston, Courtney

**MEMBER (university representative):**Jones, Ithel

**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 (89 pages)

**ABSTRACT:**Teacher retention is an area of importance for school leaders. Attrition rates are especially high in international schools (Hayden & Thompson, 2008). School leaders working in small West African international schools (500 students or less) face a more challenging landscape than many schools in other regions. The significance of this challenge is more impactful in many ways than in traditional schools in the United States. Teacher retention has a direct impact on student learning. Retention also has financial implications for school leaders in these West African international schools. The costs of recruiting teachers continue to soar and soak up school financial resources. International schools offer benefits when hiring teachers that include settling-in packages, shipping allowances, and costs associated with providing housing. Improved teacher retention would have a positive impact on school budgets and free funds for other resources that impact student learning. Many factors impact a teacher’s decision to stay or leave the school in which they work. Some of the areas that research has proven to be important include relationships with administration, geographical location, salary and benefits, and family and personal reasons. This study focused on the importance of the principal-teacher relationship role when teachers decide to stay or leave their small West African international schools and how the impact of the challenges that are faced by expatriate teachers affect the importance of that relationship. The findings of this study showed that the perception of the quality of life differentiated the stayers and leavers. The leavers could not overcome the challenges they faced in West Africa. The stayers did not have to overcome these challenges; they simply did not experience the challenges. Instead, they valued the positive relationships with principals, teachers, students, and community members. Good salary and benefits, professional development, and support were also important. Most teachers had a positive relationship with their principal regardless of their decision to stay or leave, but the difference for the stayers, this relationship was the determining factor, while for the leavers, it was not as they valued the independence, travel, and social life beyond school.

**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 24, 2019.

**NOTE (Keywords):**International School, Principal Relationship, Teacher Attraction, Teacher Relationship, Teacher Retention, West Africa

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

**NOTE (Advisory Committee):**Courtney E. Preston, Professor Directing Dissertation; Ithel Jones, University Representative; Motoko Akiba, Committee Member; Stacey Rutledge, Committee Member.

**SUBJECT:**Educational leadership

**SUBJECT:**Educational evaluation

**SUBJECT:**School management and organization

**DEGREE:**Doctoral

## Record number: 128

**FILENAME:**Oglesby\_fsu\_0071E\_14619.pdf

**TITLE:**Randomized Control Trial Examining the Efficacy of an Iu-Focused Psychoeducation Intervention

**AUTHOR:**Oglesby, Mary E.

**MEMBER (professor directing thesis):**Schmidt, Norman B.

**MEMBER (committee member):**Joiner, Thomas, Jr.

**MEMBER (committee member):**Cougle, Jesse R. (Jesse Ray), 1975-

**MEMBER (committee member):**Kelley, 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, 2018

**PHYSICAL DESCRIPTION:**1 online resource (104 pages)

**ABSTRACT:**Anxiety disorders affect more than 40 million Americans and represent a significant public health and individual burden. The existing literature supports intolerance of uncertainty (IU) as an important transdiagnostic risk factor in the development and maintenance of anxiety-related disorders. Individuals high in IU react negatively to uncertainty, believe they are unable to cope with future unknowns, and consider uncertainty itself threatening. Given the robust association between IU and anxiety-related disorders, developing interventions designed to reduce IU is important. Experimental research has shown that IU can be mitigated; however, the extant work has yet to design and examine the efficacy of a comprehensive IU-focused intervention. The aim of the current proposal was to develop and test the efficacy of a brief IU-focused psychoeducation intervention in comparison to a control intervention. The sample consisted of 84 undergraduate individuals with elevated levels of IU as measured by the Intolerance of Uncertainty Scale, Short Form (IUS-12). Participants were randomly assigned to the active (IU-focused Psychoeducation) or control (Health-focused Psychoeducation) condition. Results revealed that the active condition did not lead to reductions in IU from pre- to post-intervention or from pre-intervention to week one follow-up. However, IU was significantly reduced from pre-intervention to month one follow-up in the active condition in comparison to control. This same of pattern of findings was found at month one follow-up within the active condition for symptoms of Generalized Anxiety Disorder and levels of negative affect. Results of the present study are discussed in terms of clinical implications and directions for future research.

**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):**Summer Semester 2018.

**NOTE (Date of Defense):**May 15, 2018.

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

**NOTE (Advisory Committee):**Norman B. Schmidt, Professor Directing Thesis; Tomi Gomory, University Representative; Thomas Joiner, Committee Member; Jesse Cougle, Committee Member; Colleen Kelley, Committee Member.

**SUBJECT:**Clinical psychology

**DEGREE:**Doctoral

## Record number: 129

**FILENAME:**Omran\_fsu\_0071E\_15278.pdf

**TITLE:**Chemical Garden Catalysis of Prebiotic Chemistry

**AUTHOR:**Omran, Arthur P. (Arthur Phillip)

**MEMBER (professor directing dissertation):**Steinbock, Oliver

**MEMBER (university representative):**Blaber, Michael

**MEMBER (committee member):**DePrince, A. Eugene, III

**MEMBER (committee member):**Yang, Wei

**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 (143 pages)

**ABSTRACT:**Prebiotic processes required a reliable source of free energy and complex chemical mixtures that likely included sugars. The formose reaction is a potential source of those sugars but is tied to alkaline conditions and elevated temperatures, under which these sugars rapidly decay. Here we show that calcium, barium and iron based chemical gardens catalyze the formose reaction to produce glucose, ribose, and other carbohydrates. These thin inorganic membranes are analogs of hydrothermal vent materials—a possible place for the origin of life—and similarly exposed to very steep pH gradients. Supported by simulations of a simple reaction-diffusion model, we show that such gradients allow for the dynamic accumulation of sugars in specific layers of the thin membrane. This spatial separation of sugar production and accumulation might have been one of the earliest examples of pre-biological compartmentalization.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**chemical gardens, formose reaction, hydrothermal vent theory, origins of life, prebiotic chemistry, RNA world hypothesis

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

**NOTE (Advisory Committee):**Oliver Steinbock, Professor Directing Dissertation; Michael Blaber, University Representative; Albert Eugene DePrince, Committee Member; Wei Yang, Committee Member.

**SUBJECT:**Chemistry

**DEGREE:**Doctoral

## Record number: 130

**FILENAME:**Peek\_fsu\_0071E\_15407.pdf

**TITLE:**Discovering the Phillips Catalyst: from Characterizing the Precursor to the Initiating Sites

**AUTHOR:**Peek, Nathan

**MEMBER (professor directing dissertation):**Stiegman, Albert E., 1953-

**MEMBER (university representative):**Telotte, John C.

**MEMBER (committee member):**Shatruk, Mykhailo

**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, 2019

**PHYSICAL DESCRIPTION:**1 online resource (119 pages)

**ABSTRACT:**Our research aimed at exploiting spectroscopic techniques in order to characterize and determine the electronic and vibrational properties of chromium(VI) oxides (precursor to the Phillips catalyst) dispersed on an amorphous silica support for the sake of investigating the Phillips catalyst system. In addition to characterizing the Cr(VI)/SiO2 just mentioned, we focus on analyzing the mechanistic pathway the sites undertake to becoming catalytically active. Catalytic activation of the material involves a redox reaction with either carbon monoxide (CO) gas or ethylene (C2H4) gas to reduce the chromium to a labile, open-faced Cr(II)/Si. These highly reactive Cr(II) sites react with ethylene almost instantaneously to form the active sites for polymerization. An old sol-gel method previously developed for this system was used for the synthesis of our Cr(VI)/Si xerogel materials.17,18 These sol-gels provide higher quality spectroscopic resolution at lower concentrations and are isotropic and non-scattering which allows the use of polarization studies. These factors allow for a superior investigation through spectroscopy. Raman, resonance Raman, and low temperature fluorescent techniques were used for investigating the vibrational properties of the initial Cr(VI)/Si as well as the material after onset of polymerization. UV-Vis and fluorescent spectroscopy were used for analyzing the electronic properties of the initial Cr(VI) as well as studying the reduction of the chromium and polymerization via C2H4(g). In-situ electron paramagnetic resonance (EPR) assisted in analyzing the oxidation state of our chromium material during the different stages of the preparation and initiation. The electronic and vibrational modes of the Cr(VI)/Si precursor were assigned with the help of a collaborator from FSU whom performed computational studies We assign the electronic structure to a dioxoCr(VI) species with two terminal Cr=O bonds and two Cr-O-Si bridging networks. The possibility of other species claimed to potentially be present was tested and no spectroscopic evidence was observed for any species other than the dioxoCr. The Chromium is observed to reduce to Cr(II) through an intermediate Cr(IV) via CO reduction. It is then observed to oxidize to an organoCr(III)/Si after exposure to ethylene and formation of the active sites for polymerization. Reduction using ethylene is still less understood, but is hypothesized to go through the same oxidation states and is experimentally observed to be consistent with the CO method in terms of polymer produced and Cr(III) active sites. As to the type of Cr structure present after initiation, we identify the presence of a vinylCr(III) species and present a proposal for the mechanism of initiation for the Phillips catalyst.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Inorganic

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

**NOTE (Advisory Committee):**Albert E. Stiegman, Professor Directing Dissertation; John C. Telotte, University Representative; Mykhailo Shatruk, Committee Member; Yan-Yan Hu, Committee Member.

**SUBJECT:**Chemistry

**DEGREE:**Doctoral

## Record number: 131

**FILENAME:**Perng\_fsu\_0071E\_15398.pdf

**TITLE:**Understanding Protien Corona Formation on Inorganic Nanocrystals

**AUTHOR:**Perng, Woody

**MEMBER (professor directing dissertation):**Mattoussi, Hedi

**MEMBER (university representative):**Tang, Hengli

**MEMBER (committee member):**Steinbock, Oliver

**MEMBER (committee member):**Strouse, Geoffrey F.

**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 (106 pages)

**ABSTRACT:**Nonspecific interactions in biological media can lead to the formation of protein corona around nancolloids, which tend to alter their behavior and limit their utility when used as probes for imaging or sensing applications. Yet, understanding the corona buildup has been challenging. This dissertation focuses on understanding factors that govern corona formation and developing means to prevent such nonspecific adsorptions, using semiconductor and metallic nanocrystals as model nanocolloid systems. In Chapter 1 we showcase the intrinsic photophysical properties of quantum dots (QDs) and gold nanocrystals (AuNCs), along with the growth mechanisms and synthetic routes. In addition, we introduce the definition of “protein corona”, hard vs soft, factors that affect the corona composition, and its impact on biology and environment. We also provide an overview of the analytical techniques used and promising strategies applied in investigating and preventing nonspecific protein adsorptions, respectively. In Chapter 2 we investigate the role of surface coating on the promotion or prevention of protein corona around QDs, where we carefully vary the nature of the hydrophilic block in the surface coating, while maintaining the same dihydrolipoic acid (DHLA) bidentate coordinating motif. We first use agarose gel electrophoresis to track changes in the mobility shift upon exposure of the QDs to protein-rich media. We find that QDs capped with DHLA (which presents a hydrophobic alkyl chain terminated with a carboxyl group) could promote corona formation, in a concentration-dependent manner. However, when a polyethylene glycol block or a zwitterion group is appended onto DHLA, it yields a coating that prevents corona build-up. Additional gel experiments using SDS-PAGE allowed further characterization of the corona protein when formed. We find that for coating strategy based on the bidentate motif, only soft corona form around the DHLA-capped QDs. In chapter 3 we investigate the nonspecific protein adsorptions on AuNPs, where we strategically modify the ligand structures of a series of DHLA-based ligands. We use agarose gel electrophoresis to monitor any potential corona formation on AuNPs when exposed to bovine serum albumin (BSA) or fetal bovine serum (FBS). We find that AuNPs capped with dihydrolipoic acid (DHLA, a small alkyl-COOH) are prone to interactions with proteins, while capping AuNPs with polyethylene glycol- or zwitterion-appended DHLA significantly reduces corona buildup. Supplementing measurements using UV-Vis spectroscopy and dynamic light scattering have allowed further characterization of the role and the binding kinetics of these protein adsorptions. Our results clearly show that surface chemistry of the NP and the nature of the core material plays a significant role in corona formation. In chapter 4 we describe the effect of shape of gold nanocrystals on corona formation using nanospheres, nanostars, and nanorods. Such nanocrystals functionalized with poly(ethylene glycol), poly(isobutylene-alt-maleic anhydride) (PIMA), and PEG-appended PIMA induce or discourage nonspecific protein adsorptions depending on the surface coating used and the nature of the shape. We show that the presence of PEG moieties significantly inhibits the corona formation when exposed to complex fluids, independent to the shape of nanocrystals. We find that in absence of PEG, the shape of nanocrystals strongly intervenes with interactions at the nano-bio interface. Additionally, we show that the effect of shape on corona buildup prevails under different temperatures, a result that contributes highly to designing corona-free nanocrystals. In chapter 5 we include a summary of the findings and implications described in this dissertation, along with a discussion of the future outlook in the corona science.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**May 24, 2019.

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

**NOTE (Advisory Committee):**Hedi Mattoussi, Professor Directing Dissertation; Hengli Tang, University Representative; Oliver Steinbock, Committee Member; Geoffrey Strouse, Committee Member.

**SUBJECT:**Nanoscience

**DEGREE:**Doctoral

## Record number: 132

**FILENAME:**Pugh\_fsu\_0071E\_15319.pdf

**TITLE:**Reacquiring Identity-Based Customer Defectors

**AUTHOR:**Pugh, Harrison B. (Harrison Brandon)

**MEMBER (professor directing dissertation):**Brady, Michael K.

**MEMBER (university representative):**Holmes, R. Michael (Robert Michael), Jr.

**MEMBER (committee member):**Hofacker, Charles F.

**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 (70 pages)

**ABSTRACT:**Defected customers cost U.S. companies over $62 billion in 2016, $42 billion more than 2013 (Hyken 2016). To combat these losses, firms increasingly engage with these defectors in an effort to cultivate a fruitful second-lifetime. In a two-study, multimethod design based on a customer-company identification theory framework, this research introduces identity-based customer defection. Although many customers defect due to the lackluster performance by the company as typically studied in extant research (a performance-based defection), this research proposes that some defect due to a perceived mismatch between their identities and their perceptions of a firm’s identity (an identity-based defection). Because of their unique defection reasons, strategies that are effective for performance-based defectors may be ineffective for identity-based defectors. Study 1 utilizes twelve years of firm-provided, longitudinal data on 1,390 defected customers to demonstrate that whereas win-back communications are effective for recovering performance-based defectors, loyalty communications, those focused on reinforcing the positive, non-economic aspects of the firm, are more effective for identity-based defectors. A follow-up study focused on second-lifetime value demonstrates that identity-based defectors represent more revenue in their second-lifetimes when they receive loyalty communications after defection. Based on self-affirmation theory, experimental data in Study 2 support the idea that loyalty communications address perceived incompatibility between the defector’s identity and the identity of the firm. Findings suggest that after a firm makes a decision that may affect perceptions of its identity, it should remind customers about the various ways in which the company’s identity is still attractive.

**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):**Summer Semester 2019.

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

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

**NOTE (Advisory Committee):**Michael K. Brady, Professor Directing Dissertation; R. Michael Holmes, University Representative; Colleen M. Harmeling, Committee Member; Charles F. Hofacker, Committee Member.

**SUBJECT:**Marketing

**DEGREE:**Doctoral

## Record number: 133

**FILENAME:**Rahming\_fsu\_0071E\_15240.pdf

**TITLE:**Black Women in White Coats: Science Identity Construction in Anglophone Afro-Caribbean Women

**AUTHOR:**Rahming, Sophia G. (Sophia Glenyse)

**MEMBER (professor directing dissertation):**Jones, Tamara Bertrand

**MEMBER (university representative):**Lathan, Rhea Estelle, 1961-

**MEMBER (committee member):**Perez-Felkner, Lara

**MEMBER (committee member):**Khurshid, Ayesha

**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 (291 pages)

**ABSTRACT:**Forty-three percent of all international college students in the United States enroll in science, technology, engineering and mathematics (STEM) programs. In 2014, the Caribbean sent the highest proportion of female students (44%) to study STEM in the United States. Even though minority women in STEM must construct science identities to persist in STEM, Afro-Caribbean women tend not to be featured in research on STEM diversity and participation. Afro-Caribbean women have constructed personal and collective identities crucial to science identity construction outside of the U.S. in unique sociocultural contexts where Black is dominant and British-styled instruction remains intact. As a result, Afro-Caribbean women in STEM, while existing in a unique bifurcation of hypervisibility and invisibility resulting from multiple and intersecting identities, experience for the first time the “triple threat” minoritizing effects of being Black, female, and international/non-immigrant both in predominantly White institutions and the wider U.S. society. This research examines how triple threat experiences might facilitate or constrain science identity construction for Afro-Caribbean women in STEM. Using grounded theory, this dissertation proposes a model of science identity construction that attends to the intersectionality of Afro-Caribbean women’s experiences in STEM.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Afro-Caribbean Women, Black Women, Citizenship, Minoritization, Nativity, Science Identity

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

**NOTE (Advisory Committee):**Tamara Bertrand Jones, Professor Directing Dissertation; Rhea Lathan, University Representative; Lara Perez-Felkner, Committee Member; Ayesha Khurshid, Committee Member.

**SUBJECT:**Education, Higher

**DEGREE:**Doctoral

## Record number: 134

**FILENAME:**RamosJr\_fsu\_0071E\_14988.pdf

**TITLE:**Smartwatch Adoption within the Running Community

**AUTHOR:**Ramos, Nathaniel, Jr.

**MEMBER (professor directing dissertation):**Mon, Lorri M.

**MEMBER (university representative):**Dennen, Vanessa P., 1970-

**MEMBER (committee member):**Burnett, Kathleen M.

**MEMBER (committee member):**Kazmer, Michelle M.

**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 (144 pages)

**ABSTRACT:**This research investigates the adoption of smartwatches within the running community. By using a mixed methods design consisting of quantitative surveys and qualitative interviews, this study asks runners what factors influence their adoption of smartwatches, what information is valued and most utilized, and the impact of these devices on their behavior. This study primarily relies on Diffusion of Innovations theory as a lens through which to view the factors of adoption for runners, but it also utilizes questions from the Technology Acceptance Model to attempt to better understand the role of these devices within the running community. Through the utilization of surveys and interviews, this study identifies relative advantage to be the primary factor in adopting smartwatches and trialability to be an unimportant factor. Further, all interview participants in this study reported that smartwatches made them more aware of their behavior, and 14 of 15 interview participants stated that their behavior and/or training regimens had changed due to data they obtained via smartwatches. The findings of this study suggest that more research is needed to determine whether these changes are temporary or part of a larger, permanent trend. Further, based on this study, there is a need for more research into the impact of smartwatches in other communities to determine whether the effect of smartwatches on behavior is isolated to athletes who are actively training or whether more fitness data and greater awareness of one’s activity spurs greater movement in the population more generally.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**human behavior, smartwatch, wearable

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

**NOTE (Advisory Committee):**Lorri Mon, Professor Directing Dissertation; Vanessa Dennen, University Representative; Kathleen Burnett, Committee Member; Michelle Kazmer, Committee Member.

**SUBJECT:**Information science

**DEGREE:**Doctoral

## Record number: 135

**FILENAME:**Rawlinson\_fsu\_0071N\_15428.pdf

**TITLE:**A Matter of Priority: Exploring Attentional Resource Allocation as the Proximal Cause of the Animacy Effect

**AUTHOR:**Rawlinson, Heather Courtney

**MEMBER (professor directing thesis):**Kelley, Colleen M.

**MEMBER (committee member):**Boot, Walter Richard

**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 (48 pages)

**ABSTRACT:**People recall and recognize animate words better than inanimate words, possibly because memory systems were shaped by evolution to prioritize memory for predators, people, and food sources. However, the proximal cause of this animacy advantage is not yet known. Attentional paradigms show an animacy advantage in change detection tasks and in attentional blink tasks, which suggests that the animacy advantage in memory could stem from a prioritization of animate items when allocating attentional resources during encoding. In a series of three experiments, I replicate the animacy effect in a remember-know paradigm (Experiment 1), and test whether better recognition (Experiment 2) and better recall (Experiment 3) for animate items can be traced to enhanced attention at encoding by comparing the animacy effect under conditions of full versus divided attention at encoding. Results demonstrate that word type does not interact with attention condition, suggesting that attention is not the proximal cause of the animacy effect in memory.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Animacy, Attention, Memory, Recognition

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

**NOTE (Advisory Committee):**Colleen M. Kelley, Professor Directing Thesis; Walter R. Boot, Committee Member; Colleen Marie Ganley, Committee Member.

**SUBJECT:**Cognitive psychology

**DEGREE:**Masters

## Record number: 136

**FILENAME:**Reed\_fsu\_0071E\_15375.pdf

**TITLE:**Demagogue: The Revolutionary Birth of an American Literary Figure

**AUTHOR:**Reed, Wayne M.

**MEMBER (professor directing dissertation):**Kilgore, John Mac

**MEMBER (university representative):**Frank, Andrew, 1970-

**MEMBER (committee member):**Mariano, Trinyan

**MEMBER (committee member):**Moore, Dennis D.

**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 (217 pages)

**ABSTRACT:**This dissertation asks new questions about the figure of the demagogue as cultural production. How did the concept of the demagogue emerge and manifest itself in the public imagination during the American Revolution and what relationship does it have to revolution? Who was using this term and to what end? What cultural materials, both physical and discursive, go into the making of the demagogue as a figure of political literature? What factors make the character not only intelligible and applicable in a modern political era when the people are considered the source of all legitimate authority? I argue that elites during the American Revolution struggled to make sense of the popular movements of the 1760s, and they used the figure of the demagogue as an aesthetic expression, a way of coming to terms with the realities of a popular political revolution. Over the course of the revolution and afterwards in the run-up to the Constitutional Convention of 1787, the figure of the demagogue became a rhetorical device that elites used to intervene on public opinion of convince audiences of the dangers posed by democratic political relationships. More importantly, the demagogue registers a fundamental contradiction of modern political reality. In an era of popular sovereignty, when the people are considered the source of authority, those who aspire to power must both lead and be led by the people. The idea that the people have authority over their leaders is in contradiction with the idea that leaders have authority over the people. This is a foundational contradiction of modern political relationships that animates political movements as much as it animates the imagination. That the demagogue re-emerged in the popular imagination is a direct result of this contradiction.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**July 9, 2019.

**NOTE (Keywords):**constituent, demagogue, democracy, populism, public sphere, republicanism

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

**NOTE (Advisory Committee):**John Mac Kilgore, Professor Directing Dissertation; Andrew Frank, University Representative; Trinyan Mariano, Committee Member; Dennis Moore, Committee Member.

**SUBJECT:**American literature

**DEGREE:**Doctoral

## Record number: 137

**FILENAME:**Riling\_fsu\_0071N\_15432.pdf

**TITLE:**Sing with Me: A Survey to Guide Development of an In-Home Developmental Curriculum for Premature Infants Post-Discharge from a Neonatal Intensive Care Unit

**AUTHOR:**Riling, Alison Faye

**MEMBER (professor directing thesis):**Gooding, Lori F. (Lori Fogus)

**MEMBER (committee member):**Standley, Jayne M.

**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 (46 pages)

**ABSTRACT:**According to 2017 CDC statistics (Centers for Disease Control and Prevention), 1 in 10 infants in the United States are born prematurely. Preterm infants may demonstrate a delay in reaching developmental milestones due to extended hospitalization; however, developmental-based programs like music therapy may offset these delays. Limited research exists exploring follow-up services to offset developmental delays for infants admitted into the NICU upon discharge. The purpose of this study was to survey current music therapists to determine the current needs in the NICU, as well as provide research to assist in the development of follow-up music therapy interventions post discharge. Twenty-eight board certified music therapists who have or currently do work in the NICU participated in an online survey. Participants’ responses indicated that all participants completed NICU-MT training, with more than half reporting both having 1-3 years of experience as well as working with a minimum of 7 infants per week. The majority of the participants reported providing parent training in the NICU as well as educational resources prior to discharge. Lastly, the majority of participants responded in agreement regarding the potential benefit for follow-up music therapy services post-discharge.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**infants, medical, music therapy, neonatal intensive care unit, nicu, premature

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

**NOTE (Advisory Committee):**Lori Gooding, Professor Directing Thesis; Jayne M. Standley, Committee Member; Alice-Ann Darrow, Committee Member.

**DEGREE:**Masters

## Record number: 138

**FILENAME:**Ringer\_fsu\_0071N\_15446.pdf

**TITLE:**Suicide-Related Internet Use's Effects on Suicide Risk and Fearlessness about Death

**AUTHOR:**Ringer, Fallon B.

**MEMBER (professor directing thesis):**Joiner, Thomas, Jr.

**MEMBER (committee member):**Franklin, Joseph

**MEMBER (committee member):**Plant, Ashby

**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 (43 pages)

**ABSTRACT:**Examining suicide risk in the context of new technological advances is vital to informing suicide prevention efforts. Previous research has shown associations between internet use for harmful suicide-related purposes (e.g., increasing knowledge about lethal means) and higher suicide risk. The current study examined these associations by testing the relationship between harmful suicide-related internet use and higher suicide risk in a longitudinal design among a sample of undergraduates (n = 44, 75% female, 63.6% White/Caucasian/European American, 75% Heterosexual/Straight) and a sample of current and former military personnel (n = 88, 78.4% male, 69.3% White/Caucasian/European American, 55.7% Heterosexual/Straight). The research examined the association between baseline suicidal ideation, baseline suicide intent, number of previous suicide attempts, fearlessness about death, implicit suicide risk, and harmful suicide-related internet use. The study also examined whether harmful-suicide related internet use predicts higher suicidal ideation, higher suicide intent, increased fearlessness about death, and larger implicit associations between the self and suicide/death at a four-week follow-up. Findings did not support the effects of harmful suicide-related internet use on outcomes associated with suicide or fearlessness about death in either sample; however, results were limited by the small sample size and inconsistent responding. Further studies are needed to further clarify the role of harmful suicide-related internet use and suicide risk.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**fearlessness about death, internet, military, suicidal ideation, suicidal thoughts, suicide

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

**NOTE (Advisory Committee):**Thomas E. Joiner, Professor Directing Thesis; Joseph C. Franklin, Committee Member; Elizabeth A. Plant, Committee Member.

**SUBJECT:**Clinical psychology

**DEGREE:**Masters

## Record number: 139

**FILENAME:**Robinson\_fsu\_0071E\_15269.pdf

**TITLE:**Teacher Perceptions of Teaching Choral Music in Urban Schools

**AUTHOR:**Robinson, Gaylon

**MEMBER (professor directing dissertation):**VanWeelden, Kimberly D.

**MEMBER (committee member):**Thomas, André J. (André Jerome), 1952-

**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 (80 pages)

**ABSTRACT:**The purpose of this study was to explore choral music educators’ perceptions of teaching in urban secondary schools as compared to teaching in rural and suburban public and charter schools to provide greater clarity to help prepare preservice music educators. The participants (N = 61) in this study were music educators teaching choral music in public/charter middle or high schools in the state of Tennessee during the 2018-2019 academic school year. The results indicated that parental engagement was perceived as the greatest issue while administrative support was the least issue. The results also indicated the majority of participants believed urban schools better address classroom management issues and provides more school funding when compared to rural schools. Conversely, participants believe that rural schools provide more administrative support and parental support respectively compared to urban schools. For the results comparing urban schools to suburban schools, participants indicated they believe school funding, school climate, parental engagement, and administrative support are better addressed or provided for by suburban schools.

**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 24, 2019.

**NOTE (Keywords):**Choral, Perceptions, Rural, Suburban, Urban

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

**NOTE (Advisory Committee):**Kimberly VanWeelden, Professor Directing Dissertation; Marcia Porter, University Representative; André J. Thomas, Committee Member; Alice-Ann Darrow, Committee Member.

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

**DEGREE:**Doctoral

## Record number: 140

**FILENAME:**Rupp\_fsu\_0071N\_15270.pdf

**TITLE:**Polk County Deathparade

**AUTHOR:**Rupp, Elisabeth Anne

**MEMBER (professor directing thesis):**Hamby, Barbara, 1952-

**MEMBER (committee member):**Kirby, David, 1944-

**MEMBER (committee member):**Edwards, Leigh H., 1970-

**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 (63 pages)

**ABSTRACT:**There are four main topics that drive conversations in small towns: births, weddings, deaths, and rumors. In my hometown, in the dead-center of Florida, most rumors revolve around strange deaths and murders. This fascination with the grotesque serves as the focal point of my manuscript. However, I also want to explore different characters who are either members of the “Rumor Mill” or subjects of their whispered meetings, as well as describe significant landmarks, which will increase the realism of the manuscript, despite the absurdity. Throughout my project, I examine what makes “my own little postage stamp” of the world, to borrow Faulkner’s phrase, unique through descriptive poems of the area, persona poems for the characters, and poems focusing on the most intriguing deaths and murders. My manuscript, tentatively titled Polk County Death Parade, explores the misunderstood aspects of small towns in central Florida. The town that serves as the focal point for my manuscript appears to be a perfectly normal town with picturesque houses, churches every quarter mile, and people unafraid to walk at any time of day. However, my manuscript challenges this idyllic surface. I explain the reality of my town by dissecting the landmarks, characters, and strange deaths that serve as fodder for the rumors and local legends. I want to create a tone that falls between The Twilight Zone and Mayberry, with nods to David Lynch and Flannery O’Connor. To achieve this tone, I will incorporate lessons from both poets and fiction writers to help me create the narratives and descriptions that accompany voice driven murder stories. I admire Billy Collins’ approach to dark topics with a light tone, Flannery O’Connor’s hyper-realistic characters, and Andrew Huggins’ connection to regionality. I also want to incorporate Dorothy Allison’s belief in treating all of her characters with respect, never writing as if they are lesser people even if their actions are reprehensible. Similarly, I want to follow Larry Brown’s lead in creating places, characters, and voices that sound, if not familiar, then at least honest, for readers in and out of the South. Although not all of my poems will be focused on characterization or will be persona poems, my goal for this manuscript is to be a Southern counterpart to Edgar Lee Masters’ Spoon River Anthology. The town and people are based on my own experiences or rumors I grew up hearing, but fictionalized just enough to enhance the natural strangeness. This exploration into small town life will illustrate the universality of searching for humor in dark situations, explore a natural fascination with the grotesque, and a guilty pleasure found through the creation of local legends and rumors. While the characters, places, and actions are unique to the manuscript, the themes, emotions, and situations stretch well beyond the city limit signs. Readers do not have to be intimately familiar with Southern small towns to connect with the characters, create an image the town for themselves, and become invested in the murders. I illustrate snap shots of humanity and explore experiences that, while specific to my town still connect with people who have never lived in a small town. Deaths, murders, and questionable characters serve as common ground between my manuscript and a wide readership. Rather than limiting the reach of my project, the intimate connection to region helps to illustrate commonalities of the human experience of dissecting the strange and unusual experiences of their own hometowns. There are three major types of poems which make up my project, which will be a singular piece without sections or chapters. The majority of the manuscript is dedicated to exploring the deaths and murders through a darkly humorous tone to illustrate the natural strangeness of the town and to explore the theme of death through a non-sentimental lens. Interspersed throughout the death poems will be persona poems; some from the point-of-view of town-characters to give context regarding who lives in this area, some from the point-of-view of the deceased, and some from the point-of-view of the murderers. These voice-driven poems will not only contextualize the people who make up the town, but will work to explore dark situations from unusual perspectives. Additionally, I will include poems dedicated to the important landmarks throughout the town, such as the most popular bar, the park with an alligator filled lake, and what is generously referred to as the local country club. These poems ingratiate the reader to the town, explaining not only the geography, but to make the reader feel as if they are a part of the town as well. My manuscript opens with “They’re Good People, Babe,” a voice-driven poem outlining the types of people and situations readers will encounter throughout the project, followed by a poem detailing some of the places and people readers will encounter again as the project progresses. These opening poems will help to ground the reader in the reality of the project, giving them context before they fall into the realm of rumor and hearsay. My manuscript will continue the Southern gothic tradition of telling the stories of people who otherwise would go unnoticed. In the same way Brown, Allison, and O’Connor write about the people who exist on the periphery of society, I want to tell the stories that otherwise would never be told. I hope to obscure the line between realism and surrealism, truth and the absurd, the courtroom transcripts and the surrounding rumors. Picasso says “Art is the lie that tells the truth.” Therefore, although aspects of these poems will be based on true events, I will create an alternate universe for them, blurring the barriers between fact and fiction. The importance of this project lies with the characters whose stories deserve to be told, but with changes to protect the survivors.

**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):**March 8, 2019.

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

**NOTE (Advisory Committee):**Barbara Hamby, Professor Directing Thesis; David Kirby, Committee Member; Leigh Edwards, Committee Member.

**DEGREE:**Masters

## Record number: 141

**FILENAME:**Sabin\_fsu\_0071N\_15382.pdf

**TITLE:**Modeling Coastal Adaptation: Human-Environment Interactions in the Big Bend Region, Florida, through the Pleistocene-Holocene Boundary

**AUTHOR:**Sabin, John Edward, III

**MEMBER (professor directing thesis):**Halligan, Jessi J.

**MEMBER (committee member):**Mehta, Jayur M. (Madhusudan)

**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 (164 pages)

**ABSTRACT:**Still working on this...

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**June 23, 2019.

**NOTE (Keywords):**agent-based modeling, computer modeling, Florida, GIS, Paleoindian archaeology, Underwater archaeology

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

**NOTE (Advisory Committee):**Jessi J. Halligan, Professor Directing Thesis; Thomas P. Leppard, Committee Member; Jayur M. Mehta, Committee Member.

**SUBJECT:**Archaeology

**SUBJECT:**Paleoecology

**SUBJECT:**Computer science

**DEGREE:**Masters

## Record number: 142

**FILENAME:**Sampson\_fsu\_0071E\_15380.pdf

**TITLE:**Career Pathways to School Leadership: A Case of Florida State University Educational Leadership Program Completers

**AUTHOR:**Sampson, Erin M.

**MEMBER (professor directing dissertation):**Akiba, Motoko

**MEMBER (university representative):**Ke, Fengfeng

**MEMBER (committee member):**Preston, Courtney

**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 (104 pages)

**ABSTRACT:**Despite the critical role of school leaders in supporting teachers and improving student learning and the importance of ensuring qualified candidates to enter school leadership positions, perceptions and experiences of related to the career pathways of leadership preparation program completers into leadership are not yet fully understood. This mixed-methods study conducted a survey of 36 graduates and interviews of 9 graduates who graduated from the Florida State University’s Educational Leadership and Administration (EDA) master’s, specialist, and modified certificate programs between fall 2012 and summer 2018 to examine their career decision and experience with seeking and securing an assistant principal (AP) position. The study identified three career pathways—pathway 1: the graduates who have never applied for an AP position (17 or 47%), pathway 2: the graduates who have applied and secured an AP position (11 or 31%), and pathway 3: the graduates who have applied but not secured an AP position (8 or 22%). The main reasons for not applying for an AP position included: 1) Less time at home with family members (2.0); 2) Difficulty maintaining work-life balance (2.0); and 3) Less personal time (1.8). . Interview data revealed the differences between the graduates in pathways 2 and 3 were the availability and the use of positive relationship with school leaders and district leaders to build their reputation. While both groups were aware of the district eligibility requirements to apply for an AP position, group 2’s ability to capitalize on those established relationships to gain feedback and clear guidance on how to secure an AP position was a difference between the two groups. Another difference identified was group 2’s perception of their district’s hiring process, which included multiple rejections similar to group 3, was one of understanding while group 3’s perception was one of discouragement and skepticism of the process. An important implication of this study is for program completers to understand impactful factors that could potentially affect their career decisions upon completion of their EDA program, the research to support the job searching experiences to secure an AP position, and the necessary support to gain a comprehensive understanding of best practices to support their efforts to secure an AP position. An additional implication of this study is for program faculty to have an understanding of extenuating factors that could affect the career decisions of their students and to integrate evidence based methods of support to ensure students are leaving the program with realistic expectations to successfully secure an AP position, how to capitalize on available resources to fully understand the path to apply and secure an AP position, and knowledge of what they may encounter in the application and interview process to build resiliency and perseverance in the midst of possible rejections. KEY TERMS: Career Pathways, Assistant Principal (AP), Principal, Educational Leader, Leadership Preparation, Florida State University (FSU), Educational Leadership and Administration (EDA) Program, Florida Department of Education (FDOE)

**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):**Summer Semester 2019.

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

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

**NOTE (Advisory Committee):**Motoko Akiba, Professor Directing Dissertation; Fengfeng Ke, University Representative; Courtney E. Preston, Committee Member; Stacey Rutledge, Committee Member.

**SUBJECT:**Educational leadership

**DEGREE:**Doctoral

## Record number: 143

**FILENAME:**Sanchez\_fsu\_0071N\_15452.pdf

**TITLE:**Enhancing the Observability of Distribution Systems State Estimation

**AUTHOR:**Sanchez Cifuentes, Andres F. (Andres Felipe)

**MEMBER (committee member):**Anubi, Olugbenga Moses

**MEMBER (committee member):**Li, Hui, 1970-

**CORPORATE NAME:**Florida State University

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

**CORPORATE NAME:**Department of Electrical Engineering

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

**PHYSICAL DESCRIPTION:**1 online resource (60 pages)

**ABSTRACT:**Monitoring distribution systems via state estimation can be affected negatively if the measurements are modified by malicious attacks. Under the assumption that the measurements devices were successfully attacked is necessary to detect the presence of the bad data. After detecting bad data artificial measurements, called Pseudomeasurements, are used to replace the and then run again the state estimation algorithm for system monitoring. The procedure previously described is shown in this project.

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

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

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

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

**NOTE (Advisory Committee):**Charalambos Konstantinou, Professor Directing Thesis; Olugbenga Moses Anubi, Committee Member; Hui Li, Committee Member.

**SUBJECT:**Electrical engineering

**DEGREE:**Masters

## Record number: 144

**FILENAME:**Saylor\_fsu\_0071N\_15316.pdf

**TITLE:**Using the Acute: Chronic Workload Ratio to Predict Peak Performance in Elite NCAA Track and Field Sprinters

**AUTHOR:**Saylor, Hannah Elizabeth

**MEMBER (professor directing thesis):**Ormsbee, Michael J.

**MEMBER (committee member):**Chow, Graig Michael

**MEMBER (committee member):**Hickner, Robert C., 1962-

**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 (90 pages)

**ABSTRACT:**Purpose: To establish the relationship between the acute:chronic workload ratio and peak performance in division 1 NCAA track and field sprinters over the course of the 2018 outdoor season. Methods: The acute:chronic workload ratio was determined by calculating the sum of the week before the competition’s session rating of perceived exertion of training load (acute load) and dividing it by the average weekly session rating of perceived exertion of training load over the previous four weeks (chronic workload). All ratings of perceived exertion were self-reported through an Athlete Management System (AMS) no later than one hour after the training session or competition. The sprinters’ race times were recorded through an online data base and, in the primary statistical analysis, were analyzed for confounding variables. Once the confound variables were established, Pearson correlations were used covarying for the confounding variables. Our hypothesis was that there would be a positive relationship between the acute:chronic workload ratio and the 100m and 200m race times. In a secondary analysis, violating the statistical assumption of independence, the acute:chronic workload ratio was correlated to the sum of all data points for male and female 100m and 200m race times and the male and female 100m and 200m Z-scores for each sprinter. Bins were created with the hypothesis that having an acute:chronic workload ratio between 0.8 and 1.3 would be correlated with lower race times in the 100m and 200m races and more negative Z-scores for the 100m and 200m races. Results: A lower acute:chronic workload ratio resulted in a moderate positive correlation with lower race times in the 100m (R= 0.542) and 200m (R= 0.711) races. Conclusions: Maintaining an acute:chronic workload ratio between 0.8 and 1.3 may be optimal for elite division 1 NCAA track and field sprinters to reach their peak performance in the 100m and 200m races. An individualized approach to training load using the acute:chronic workload ratio should help coaches and performance staff with individualized training-load planning and prescription for the sprinters to reach peak performance.

**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):**Summer Semester 2019.

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

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

**NOTE (Advisory Committee):**Michael J. Ormsbee, Professor Directing Thesis; Graig Chow, Committee Member; Robert Hickner, Committee Member.

**SUBJECT:**Nutrition

**DEGREE:**Masters

## Record number: 145

**FILENAME:**Sciuchetti\_fsu\_0071E\_15250.pdf

**TITLE:**Sound and Place: An Affective Geography of the Hudson River, New York, USA

**AUTHOR:**Sciuchetti, Mark Joseph, Jr.

**MEMBER (professor directing dissertation):**Mesev, Victor

**MEMBER (university representative):**Von Glahn, Denise, 1950-

**MEMBER (committee member):**Doel, Ronald Edmund

**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 (202 pages)

**ABSTRACT:**Sonic experiences of a place are both personal and collective. They are derived from affectual encounters in that place in the everyday. The sounds of a place provide detail on the culture, development, and environment. Geographers have often overlooked the role of individual experiences with sound in places for developing our perspective on natural spaces. The visual has offered geographers a great deal of material and meaning in terms of the study of the landscape and personal connections to place. This focus on the material, concrete, and visual aspects of society has often denied the sense of hearing. However, sound is part of embodied everyday experience of places and cannot be separated from affectual experiences or the spaces in which sound is heard. This contributes to shaping culture. Though research into the soundscape and sonic experiences has been the focus in various disciplines, research in geography is lacking an appreciation of the role of place in exploring sonic experiences. The role of sound and music in geography often takes the form of production and distribution of music and its economics and politics. But with little attention to the role of the sound or affect. Therefore, this dissertation sheds light on the role of the soundscape and the spatiality of sound in the construction of place. It also explores the role that affectual encounters in natural everyday spaces have on the individual and their place development. As a starting point, the dissertation seeks to develop a theoretical framework underpinned by geography, musicology, and sound studies to help describe the affective capacity of sound in place. Developing the concept of affect beyond the traditional realm of non-representational theory, the dissertation incorporates concepts of emotion and affect to explain the development of place through sound. Reaching into various theoretical frameworks, including behavioral geography, sonic geography, geography of music, representational theory, non-representational theory, participant observation, and reflexivity, it creates a more unified conceptualization of everyday sonic experiences of place by developing an approach which moves affective sonic encounters beyond the representational. These theoretical underpinnings are demonstrated by an empirical multi-modal approach to the study of sound in place. It uses a case study that provides a vehicle to explore how affect and emotion are experienced in nature through sound and place using sound journals, historical/archival data, sound recordings, and participatory observation. The fieldwork was conducted while sailing along the Hudson River in the US state of New York during the summer of 2017. The sites where data were collected complement those recorded by Annea Lockwood for her composition, A Sound Map of the Hudson River (1983). The archival material on texts written about the river was found from various historical sources, and interviews were provided by Lockwood. The locations chosen for recording sounds include various cultural, social, economic, industrial and environmental developments along the river. The recordings from Lockwood’s CD and the six interviews she conducted in 1982 offer a starting point to describe the construction of place through sound. The four journals collected with crewmembers of the Gail Frances on the river as well as my own observations from the Hudson River provide a better conceptualization of participants’ affective experiences through sound as they are immersed in the places they describe. The historical interviews and recordings from 1982 were paired with the journals and recordings from 2017 to emphasize how sound of the natural environment elicits powerful affective experiences that molds an individual’s sense of place. Through the participants’ interviews and journals, it is clear that there are some aspects of the soundscape that have become essential to the discussion of a place and often recreate a sense of nostalgia with almost a spiritual sensation. Other aspects of the sounds of the places along that Hudson River remind participants of the divisions between the human and the natural environments, and that there are different perspectives to the river depending on an individual’s approach. The participants’ encounters also carried a common theme of everyday experience and survival as these were individuals who depended upon the river. From these interviews, journals, and recordings, it is clear that one role of space and sound is in mediation of the affective encounters that individuals endure in place, which inspires emotional experiences. My study demonstrates that sound is an essential aspect of the experience of place and can be explored geographically, thus providing a framework for future research and an empirical, geographical examination of individual sonic experiences within a natural environment.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Cultural Geography, Environment, Hudson River, Identity, Place, Sound

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

**NOTE (Advisory Committee):**Victor Mesev, Professor Directing Dissertation; Denise Von Glahn, University Representative; Ronald Doel, Committee Member; Tyler McCreary, Committee Member.

**SUBJECT:**Geography

**SUBJECT:**Music

**DEGREE:**Doctoral

## Record number: 146

**FILENAME:**Seibert\_fsu\_0071E\_15271.pdf

**TITLE:**Dyadic Levelcoping and the Effects on Diabetes Management and Control in Couples with One Partner Diagnosed with Type 2 Diabetes: A Pilot Study

**AUTHOR:**Seibert, Gregory Scott

**MEMBER (professor directing dissertation):**Fincham, Frank D.

**MEMBER (university representative):**McNulty, James

**MEMBER (committee member):**McWey, Lenore M.

**MEMBER (committee member):**Cui, Ming, 1971-

**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 (106 pages)

**ABSTRACT:**In an attempt to improve treatment adherence in type 2 diabetes patients, researchers are turning to the couple system as one potential point of intervention. However, due to the lack of knowledge surrounding the role general relationship processes have in influencing diabetes management behaviors, very few couple-based interventions exist. Therefore, the current pilot study assesses the potential importance, and feasibility, of examining dyadic coping processes in the context of diabetes management and support among couples where one partner has type 2 diabetes. Preliminary findings suggest dyadic coping processes of both partners may be important in helping understand how general couple relationship processes can be used as a point of intervention for treating type 2 diabetes. However, a full-scale study is not feasible without adaptations to the current study protocol, measurements, recruitment procedures and funding.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**May 28, 2019.

**NOTE (Keywords):**couples, diabetes, dyadic coping

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

**NOTE (Advisory Committee):**Frank D. Fincham, Professor Directing Dissertation; Jim McNulty, University Representative; Lenore M. McWey, Committee Member; MingCui, Committee Member.

**SUBJECT:**Families--Study and teaching

**SUBJECT:**Animal behavior

**SUBJECT:**Health services administration

**DEGREE:**Doctoral

## Record number: 147

**FILENAME:**Shanks\_fsu\_0071E\_15381.pdf

**TITLE:**How Technology and Aesthetics Shape Consumer Decision Making

**AUTHOR:**Shanks, Ilana

**MEMBER (professor co-directing dissertation):**Mende, Martin

**MEMBER (professor co-directing dissertation):**Scott, Maura L.

**MEMBER (university representative):**Lamont, Bruce T.

**MEMBER (committee member):**Brady, Michael K.

**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 (118 pages)

**ABSTRACT:**This dissertation examines how technology and aesthetics impact consumer decision making. The robotics literature has examined how features of robots such as the level of autonomy (Stein, Liebold, and Ohler 2019; Złotowski, Yogeeswaran, and Bartneck 2017) and humanoid design elements (Mende et al. forthcoming) impact consumer decision making and how consumers respond to robots. Moreover, Bagchi and Cheema (2013) examined how aesthetic features influence consumer decision making. I seek to add to this literature in two Essays in this dissertation. Essay 1 examines how technology in a service setting affects a consumer’s compliance and loyalty intentions. Essay 2 examines consumer decision making in a different context and outcome by studying how an aesthetic feature of a brand identifier, cuteness, influences consumer willingness to pay. Essay 1 introduces a new concept to the marketing literature, cobotic teams, in an examination of the effect of technology on consumer decision making. More specifically, Essay 1 examines if a robot-led, as compared to a human-led, cobotic team has implications for a consumer’s compliance and loyalty intentions. Essay 1 finds that consumers have lower compliance and loyalty intentions to a robot-led cobotic team as compared to a human-led cobotic team. Moreover, Essay 1 uncovers that a serial mediation of an increase in anxiety, leading to a decrease in warmth and competence mediates this relationship. In an examination of how to attenuate this effect, power distance belief, risk acceptance, and perceived control are demonstrated moderators. Essay 2 builds on the cuteness literature examining a potential downside to the use of cuteness; a decrease in willingness to pay. The results of Essay 2 demonstrate that consumers have a lower willingness to pay to a seller using a cute brand identifier, such as a logo or a mascot, as compared to a seller using a neutral brand identifier. Examining the process underlying this effect, Essay 2 uncovers that consumers experience an increase in intention to dominate the firm using a cute brand identifier, resulting in a decrease in willingness to pay. Essay 2 then offers conceptual extensions of the findings theorizing that the size of the seller, the strategic use of the brand identifier, and the agency of an accompanying message will moderate the basic effect. Thus, Essay 2 extends the understanding of consumer decision making as a result of a firm’s use of cuteness. While previous research has demonstrated that cuteness results in positive behaviors such as an increase in indulgent consumption (Nenkov and Scott 2014), heightened carefulness in behavior (Sherman, Haidt, and Coan 2009), and an increase in prosocial behavior (Wang, Mukhopadhyay, and Patrick 2017), Essay 2 suggests that the use of cuteness may have a backfiring effect that has financial implications for firms, a decrease in willingness to pay.

**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):**Summer Semester 2019.

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

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

**NOTE (Advisory Committee):**Martin Mende, Professor Co-Directing Dissertation; Maura L. Scott, Professor Co-Directing Dissertation; Bruce T. Lamont, University Representative; Michael K. Brady, Committee Member; William C. Bolander, Committee Member.

**SUBJECT:**Marketing

**DEGREE:**Doctoral

## Record number: 148

**FILENAME:**Shen\_fsu\_0071E\_15367.pdf

**TITLE:**Managing Inter-Governmental Relationships: Collaborative Governance, Service Delivery, and Fiscal Federalism

**AUTHOR:**Shen, Ruowen

**MEMBER (professor directing dissertation):**Feiock, Richard C.

**MEMBER (university representative):**Zhao, Tingting, (Geography Porfessor)

**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 (125 pages)

**ABSTRACT:**How do local governments manage inter-governmental relationships in the context of urban sustainability? In an age of emerging impacts from global climate change and over-exploitation of natural resource, it is important to understand the role of local government in managing sustainability. Yet, sustainability is a complex area characterized as authority fragmentation which creates negative externalities and opportunistic behaviors. To better manage it, local governments rely on integrative actions such as inter-local collaborations and interactive exchange with higher level authorities, thus, embedding local governments in a nexus of inter-governmental relationships. However, gaps remain in our understanding of urban sustainability contexts and how local governments manage inter-governmental relationships to lower collaboration risks, share power, and reduce compliance burdens. Additionally it is important to identify what difference these relationships make for implementing federal grants, delivering services, and collaborative actions under different levels authority. This dissertation fills these gaps by investigating the structure of relationships among local governments in collaborative urban sustainability networks in both China and US and the perceptions of local governments to federal imposed rules and compliance while implementing one-shot federal sustainability program. The research findings suggest that: (1) local governments select collaborative partners strategically, depending upon the nature of collaborative relations, collaboration risks, and multiplexity of collaborations, which make networks demonstrate different configurations; (2) certain actors in the network are more powerful to administer the collaborative relationship due to possessing accesses to valuable resources such as political information, administrative capacity, funding, and innovative information; (3) local governments as grantees perceive rule compliance burden differently based on their relationships with federal grantor including goal congruence, resource dependence, and previous interactive relationships. In a one-shot grant, goal congruence and previous interactive relationships have significant effects on perceived compliance burden. Together these three studies add important new insights to our understanding of intergovernmental relations.

**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):**Summer Semester 2019.

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

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

**NOTE (Advisory Committee):**Richard C. Feiock, Professor Directing Dissertation; Tingting Zhao, University Representative; Ralph S. Brower, Committee Member; Kaifeng Yang, Committee Member.

**SUBJECT:**Public administration

**DEGREE:**Doctoral

## Record number: 149

**FILENAME:**Shin\_fsu\_0071E\_15392.pdf

**TITLE:**Structural and Dynamic Characterization of Crga; a Small Helical Membrane Protein in a Lipid Bilayer Using Solid-State NMR

**AUTHOR:**Shin, Yiseul

**MEMBER (professor directing dissertation):**Cross, Timothy A.

**MEMBER (university representative):**Alamo, Rufina G.

**MEMBER (committee member):**Hu, Yan-yan

**MEMBER (committee member):**Stagg, Scott

**MEMBER (committee member):**Fajer, Piotr 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 (122 pages)

**ABSTRACT:**CrgA is a small helical membrane protein from Mycobacterium tuberculosis (Mtb) and known to recruit other cell division proteins to the divisome, a substantial protein complex for Mtb cell division. There is a lack of information about the formation of the divisome, because most of the Mtb cell division proteins, including CrgA, do not have homologs in the traditional model bacteria, such as E. coli. Thus, structural information is needed to understand how these proteins interact and function in the divisome. However, small helical membrane proteins are such a challenging target for structural biology, because they are surrounded by the complex membrane environment, which has varying biophysical properties in terms of the dielectric constants, water concentration, fluidity, and a lateral pressure profile. The entire membrane protein does not experience the same environment, and therefore it is critical to understand the dynamics of each domain in order to characterize its structure. CrgA was characterized as having a cytoplasmic N-terminus (30 residues long) consisting of two dynamically different regions: an intrinsically disordered region (IDR) and a β-strand. Even though most Mtb divisome proteins were predicted to have at least one IDR, the roles of IDRs in membrane proteins has not been fully explored. In this dissertation, different solid-state NMR techniques were used to characterize the water soluble regions such as IDRs of membrane proteins. Identifying a small portion of the protein in the lipid interfacial region is not feasible without providing a native-like lipid bilayer environment. The observation of the β-strand addressed the importance of the appropriate membrane mimetic to characterize the interfacial region of CrgA. Also, unambiguous interhelical distance restraints are essential for determining the correct tertiary and quaternary structure of a helical membrane protein. However, high contents of hydrophobic residues in the transmembrane domain make sequence specific assignments a difficult task, so various methods, such as specific isotope labeling schemes and mutagenesis were implemented to obtain the distance restraints. The sequence specific assignment strategies presented here for CrgA can be applied to other membrane protein systems. Combining the structural restraints from both magic angle spinning and oriented sample NMR led to the dimeric structure of CrgA using molecular dynamics simulations. Additionally, the mutagenesis data helped to define the dimeric interface for CrgA. In the case of CrgA, it is necessary to sort out any residues at the helix-helix interfacial region in the same monomer versus those located in the monomer-monomer interface of the dimer. Excluding those residues involved in the dimer interface will facilitate defining the lipid-facing residues available for CrgA’s binding partners. Since CrgA is a pivotal component of the divisome, the structure of CrgA will provide great insight into the formation of the divisome to advance knowledge about Mtb cell division.

**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):**Summer Semester 2019.

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

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

**NOTE (Advisory Committee):**Timothy A. Cross, Professor Directing Dissertation; Rufina G. Alamo, University Representative; Yan-Yan Hu, Committee Member; Scott Stagg, Committee Member; Peter G. Fajer, Committee Member.

**SUBJECT:**Biochemistry

**DEGREE:**Doctoral

## Record number: 150

**FILENAME:**Short\_fsu\_0071E\_14983.pdf

**TITLE:**A Randomized Clinical Trial of Brief Behavioral Treatment for Insomnia to Reduce Substance Use Disorder Risk

**AUTHOR:**Short, Nicole A. (Nicole Amai)

**MEMBER (professor directing dissertation):**Schmidt, Norman B.

**MEMBER (university representative):**Winegardner, Mark, 1961-

**MEMBER (committee member):**Cougle, Jesse R. (Jesse Ray), 1975-

**MEMBER (committee member):**Hart, Sara, (Professor of Psychology)

**MEMBER (committee member):**Joiner, Thomas, Jr.

**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 (73 pages)

**ABSTRACT:**Substance use disorders (SUDs) are a prevalent and impairing condition, particularly among trauma exposed individuals. The current proposal aimed to address the critical need for targeted direct SUD prevention in this population by intervening on a novel, malleable risk factor for SUD common among trauma-exposed individuals: sleep disturbance. Sleep disturbance prospectively predicts the development of SUD and may confer risk for SUD by increasing stress reactivity, decreasing decision-making abilities, and ultimately promoting substance use to relieve negative affect, a core etiological factor in SUD. However, to our knowledge, no experimental studies have determined whether improving sleep leads to reductions in SUD risk. As such, the current study used a randomized controlled trial design to test the effects of brief behavioral treatment for insomnia (BBTI) against a waitlist control among a sample of trauma-exposed young adults with poor sleep and risk for SUD (N = 68). Results indicated that BBTI was more effective than the waitlist control in reducing self-reported insomnia symptoms and sleep efficiency at Post-intervention, with medium to large effect sizes. Furthermore, reductions in insomnia symptoms mediated treatment effects on reducing coping-oriented cannabis use, PTSD symptoms, and cannabis-related problems. Future research should replicate these results in a larger sample, with longer-term follow-ups and improved retention rates. Overall, BBTI is a promising intervention for reducing insomnia symptoms, and, in turn, coping-oriented cannabis use, cannabis problems, and PTSD symptoms in at-risk cannabis users.

**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 25, 2019.

**NOTE (Keywords):**cannabis, insomnia, posttraumatic stress, sleep

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

**NOTE (Advisory Committee):**Norman B. Schmidt, Professor Directing Dissertation; Mark Winegardner, University Representative; Jesse R. Cougle, Committee Member; Sara Hart, Committee Member; Thomas Joiner, Committee Member.

**SUBJECT:**Clinical psychology

**DEGREE:**Doctoral

## Record number: 151

**FILENAME:**Singer\_fsu\_0071E\_15358.pdf

**TITLE:**Adding Community to Care, Custody, and Control: Organizational, Staff, and Inmate Perceptions of Jail-Based Reentry Programming

**AUTHOR:**Singer, Alexa J.

**MEMBER (professor directing dissertation):**Gertz, Marc G.

**MEMBER (university representative):**Gussak, David

**MEMBER (committee member):**Hay, Carter H.

**MEMBER (committee member):**Blomberg, Thomas G.

**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 (154 pages)

**ABSTRACT:**There is a great deal of research about prisons, but there is a gap in research about jails in the correctional literature. This is particularly true for research about jail inmate reentry. Much of what is known is descriptive in nature, and there is a lack of focus on jail inmate reentry both in research and in practice, likely due to the many barriers associated with implementing jail-based reentry programming. Jails are organizations and as such can be studied using organizational theories, specifically functional systems analysis. This dissertation takes a functional systems analysis approach to provide an in-depth look at a large Central Florida Jail to understand its formally stated goals, how these goals work in practice, how they have changed over time, and whether this jail is achieving organizational efficiency and accomplishing its goals. This study examines three parts of this organization: (1) the organization as a whole, (2) the staff, and (3) the inmates. To do so, it makes use of three data sources and methods: (1) a content analysis of annual reports and strategic plans, (2) coding of in-depth qualitative interviews with jail staff, and (3) and quantitative analyses (OLS) of surveys of jail inmates. The annual reports and interviews of jail staff determine how the focus on reentry has changed over time at the organizational level and the inmate surveys examine the influence of reentry programming participation on inmate perceptions of post-release success, perceived importance of various reentry-related issues for staying out of jail, and inmate self-perceptions. The findings suggest that there has been an increased focus on reentry over the last two decades in this jail, as the jail has shifted its focus from being primarily interested in safety-related goals to being interested in rehabilitating inmates and helping them to successfully return to society. Despite this shift, results also show that the programs offered to inmates do not increase inmates’ perceived preparedness, perceived importance of reentry, or self-perceptions.

**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):**Summer Semester 2019.

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

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

**NOTE (Advisory Committee):**Marc Gertz, Professor Directing Dissertation; David Gussak, University Representative; Carter Hay, Committee Member; Thomas Blomberg, Committee Member.

**SUBJECT:**Criminology

**DEGREE:**Doctoral

## Record number: 152

**FILENAME:**Smalley\_fsu\_0071N\_15430.pdf

**TITLE:**Comparing Mindfulness-Based Art Therapy and General Therapeutic Clay Use for Stress and Anxiety

**AUTHOR:**Smalley, Quinn

**MEMBER (professor directing thesis):**Van Lith, Theresa

**MEMBER (committee member):**Gussak, David

**MEMBER (committee member):**Parker-Bell, Barbara Faye

**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 (108 pages)

**ABSTRACT:**The present qualitative study explored college student responses to personal clay use or mindfulness-based art therapy (MBAT) twice a week for stress reduction. Participants were recruited from a larger art therapy study, in which the biological stress marker, cortisol, was tested following time spent playing with clay. This study was divided into two groups, a neutral clay group (NCT group) who solely played with clay for stress reduction, and an MBAT group, also given clay, but mindfulness exercises as well. Participants from both groups were chosen to be interviewed about their experience to compare perceptions. Interviews took place once at the start of the study, and a second time after the study was complete. The semi-structured interviews explored 1) the nature of college student stress and stress management, 2) responses to MBAT on stress, anxiety, and general student functioning in the college setting, and 3) responses to personal clay use on stress, anxiety, and general student functioning in the college setting. Following thematic analysis of all interview transcriptions, differences were noted between those who engaged in personal clay use, combined with supplemental mindfulness exercises (MBAT group), and those who were provided solely with personal clay without prompts or guidance (Neutral Clay Task group; NCT). The results showed that MBAT participants learned new, specific ways of managing stress proactively, while experiencing mind and body connection, and gaining a sense of mastery and accomplishment. Participants in the NCT group also expressed that they were able to relax, work through their stressors, and create new self-care habits, but the effects of their clay use were described as more short-term, and they desired more guidance managing stressors. These results possibly indicate that MBAT could be effective for college students wanting techniques for lasting stress reduction and anxiety relief. Keywords: self-care, college students, stress, anxiety, mindfulness-based art therapy, clay

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

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

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

**NOTE (Keywords):**anxiety, art therapy, clay, college students, mindfulness, stress reduction

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

**NOTE (Advisory Committee):**Theresa Van Lith, Professor Directing Thesis; Dave Gussak, Committee Member; Barbara Parker-Bell, Committee Member.

**SUBJECT:**Mental health

**DEGREE:**Masters

## Record number: 153

**FILENAME:**Sockwell\_fsu\_0071E\_15277.pdf

**TITLE:**Mass Conserving Hamiltonian-Structure-Preserving Reduced Order Modeling for the Rotating Shallow Water Equations Discretized by a Mimetic Spatial Scheme

**AUTHOR:**Sockwell, K. Chad (Kenneth Chad)

**MEMBER (professor directing dissertation):**Gunzburger, Max D.

**MEMBER (university representative):**Wahl, Horst

**MEMBER (committee member):**Peterson, Janet S.

**MEMBER (committee member):**Quaife, Bryan

**MEMBER (committee member):**Huang, Chen, (Professor of Scientific Computing)

**CORPORATE NAME:**Florida State University

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

**CORPORATE NAME:**Department of Scientific Computing

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

**PHYSICAL DESCRIPTION:**1 online resource (134 pages)

**ABSTRACT:**Ocean modeling, in a climate-modeling context, requires long time-horizons over global scales, which when combined with accurate resolution in time and space makes simulations very time-consuming. While high-resolution ocean-modeling simulations are still feasible on large HPC machines, performing uncertainty quantification or other many query applications at these resolutions is no longer feasible. Developing a more efficient model would allow for efficient uncertainty quantification, data assimilation, and spinup initializations. For these techniques to be feasible in practice, a faster model must be designed which can still attain sufficient accuracy. Techniques such as reduced order modeling produce an efficient reduced model based on existing high-resolution simulation data. Models produced by these techniques provide a tremendous speedup at the cost of reduced accuracy. To offset this trade-off, novel strategies are developed to retain as much accuracy as possible while still achieving tremendous speedups. Some of these methods improve accuracy by incorporating physical properties into the reduced model, leading to better solution quality. In this dissertation, a novel reduced order modeling method, the Hamiltonian-structure-preserving reduced order modeling method, will be derived and analyzed. The Hamiltonian structure is possessed by many physical systems and is directly related to energy conservation. This method produces a reduced model which retains the Hamiltonian structure of non-canonical Hamiltonian systems, which are the category of systems that many ocean models fall into. Error estimates are proven for the new method. The model is also be made to preserve linear invariants in the reduced model which are Casimirs. Casimirs are a class of special conserved quantities in the Hamiltonian Framework. For ocean-modeling, the Casimirs we consider are mass and potential vorticity. The new reduced model is proven to conserve both of these quantities. The model is also implemented in a special inner product derived from the Hamiltonian Framework, the approximate energy inner product. This special inner product not only improves the accuracy of the new method but also improves the accuracy of the traditional reduced order modeling method and leads to favorable analytical properties for problems with quadratic Hamiltonian functionals. The new method will be applied to the rotating shallow water equations, which act as a proxy to real ocean models, and compared to the traditional reduced order modeling method. Both energy conserving and forced test-cases are considered where energy conservation, accuracy, and stability are investigated. Special techniques are also implemented to ensure that the new method is as efficient as possible.

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

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

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

**NOTE (Keywords):**Casimirs, Hamiltonian structure preserving, Linear invariants, Ocean Modeling, Reduced order modeling, Rotating Shallow Water Equations

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

**NOTE (Advisory Committee):**Max Gunzburger, Professor Directing Dissertation; Horst Wahl, University Representative; Janet Peterson, Committee Member; Bryan Quaife, Committee Member; Chen Huang, Committee Member.

**SUBJECT:**Applied mathematics

**DEGREE:**Doctoral

## Record number: 154

**FILENAME:**Sorenson\_fsu\_0071N\_15447.pdf

**TITLE:**To Recognize or Not to Recognize: What Is the Effect on Relearning?

**AUTHOR:**Sorenson, Parker Andrew

**MEMBER (professor directing thesis):**Kelley, Colleen M.

**MEMBER (committee member):**Boot, Walter Richard

**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 (62 pages)

**ABSTRACT:**Repeated experiences are a cornerstone of learning and memory, but to what extent does the benefit of repetition depend upon noticing it? A rich literature exists examining the impact that an original learning experience has on a current experience when recognition of repeated material occurs while a surprisingly limited amount of research has examined the impact on relearning when recognition of repetition fails. Asch (1969) reported that recognition of repetition was necessary to experience a benefit of repeated experiences while the formal memory model Retrieving Effectively from Memory (REM; Shiffrin & Steyvers, 1997), incorporating elements of Asch, assumes that an initial experience establishes a memory trace which is added to during a repetition, but only if the repetition accesses the original trace. If the repetition is not noticed, a second memory trace is created. I discuss research exploring the impact of recognition during a subsequent learning experience when the lists are separated by extreme context changes. In two experiments I attempted a conceptual replication of Asch and show that while recognition may not be necessary to receive a benefit of repeated information, there is a greater benefit during relearning when recognition of repetition occurs.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Associative learning, Context, Memory, Relearning

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

**NOTE (Advisory Committee):**Colleen M. Kelley, Professor Directing Thesis; Walter Boot, Committee Member; David W. Braithwaite, Committee Member.

**SUBJECT:**Cognitive psychology

**DEGREE:**Masters

## Record number: 155

**FILENAME:**SorribesRodriguez\_fsu\_0071E\_15274.pdf

**TITLE:**Gliomas Diagnosis, Progress, and Treatment: A Mathematical Approach

**AUTHOR:**Sorribes Rodriguez, Inmaculada Concepcion

**MEMBER (professor directing dissertation):**Jain, Harsh Vardhan

**MEMBER (university representative):**Sang, Qing-Xiang

**MEMBER (committee member):**Cogan, Nicholas G.

**MEMBER (committee member):**Moore, Matthew Nicholas J.

**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 (160 pages)

**ABSTRACT:**The diagnosis and treatment of gliomas continues to pose a significant challenge for oncologists who not only have to contend with managing acute neurological symptoms, but also the almost inevitable development of resistance to treatment. Indeed, the last 25 years have produced minimal advancements in treatment efficacy, even though significant efforts and resources have been invested in the quest for breakthroughs. This effort has not been restricted only to clinicians or oncologists, with mathematical modeling also playing an increasingly important role. A variety of models aimed at providing new insights into glioma growth and response to treatment have been proposed. Initially designed to capture fundamental behavior of tumor cells, such as growth and motility, these models quickly became well-established and multiple extensions have since been introduced. However, as increasing biological details of how tumor cells respond to treatment at cellular and subcellular levels are revealed, mathematical models need to include this state of the art knowledge. The work presented in this thesis seeks to do this by refocusing our attention back to the most fundamental question: why are gliomas fatal? Biologically, it is known that glioma lethality is driven by a fast growth that increases intracranial pressure resulting in lethal neurological damage, which current treatments fail to prevent due to tumor cell resistance to treatments such as chemotherapy. By creating mathematical models inspired by these key elements of glioma malignancy, the work presented here seeks to elucidate what drives resistance to chemotherapy and how to overcome or mitigate it, as well as how malignancy correlated with intracranial pressure dynamics. Thus, the work comprises two main parts: (1) in silico optimization of treatment strategies using chemotherapy coupled with novel cell-repair inhibitors currently in various stages of the clinical trial; and (2) a study of tumor-induced intracranial pressure and edema in gliomas of grade I-IV. A wide variety of mathematical modeling techniques are used, that incorporate biomechanical, biochemical, pharmacokinetics, and pharmacodynamics aspects, and include a level of detail hitherto unconsidered. The proposed models are validated and analyzed by employing a diverse set of mathematical tools that range from structural identifiability, parameter estimation, to global and local sensitivity analysis. As a result of this work, we propose a treatment strategy that showed a 30% improvement in patient survival time over conventional treatment when treating heterogeneous brain tumors in silico. Moreover, the second part of this work demonstrates how the spatio-temporal dynamics of tumor-induced intracranial pressure correlate with cancer grade, providing a better understanding of the mechanisms that underlie increased intracranial pressure onset. Both projects come together as a first step towards a better understanding of the poor survival rates of patients afflicted with gliomas. They raise new questions about what characterizes the malignancy of primary brain tumors and how clinicians can fight it. Continued modeling effort in these directions has the potential to make an impact in the field of brain cancer diagnostics and treatment.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**May 30, 2019.

**NOTE (Keywords):**Age-structure, Biomechanical, Chemotherapy Resistance, Gliomas, Intracranial pressure, Mathematical Modeling

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

**NOTE (Advisory Committee):**Harsh V. Jain, Professor Directing Dissertation; Qing-Xiang Amy Sang, University Representative; Nicholas G. Cogan, Committee Member; M. Nicholas J. Moore, Committee Member.

**SUBJECT:**Applied mathematics

**SUBJECT:**Mathematics

**DEGREE:**Doctoral

## Record number: 156

**FILENAME:**SpencerJr\_fsu\_0071E\_15259.pdf

**TITLE:**Like a Unicorn: A Narrative Inquiry Exploring the Leadership Experiences of Undergraduate Black Men

**AUTHOR:**Spencer, Dorsey, Jr.

**MEMBER (professor co-directing dissertation):**Guthrie, Kathy L.

**MEMBER (university representative):**Roberts, Winston

**MEMBER (committee member):**Jones, Tamara Bertrand

**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 (184 pages)

**ABSTRACT:**There is an emerging body of research on the leadership learning of college students, but studies that examine the influence of racial or ethnic identity are minimal. Studies on the leadership learning of Black students and, more specifically, Black men is even scarcer. This dissertation study used a narrative inquiry methodology to explore how the experiences of undergraduate Black men influenced their leader identity. The study was grounded in a conceptual framework called experiential culturally relevant leadership learning that incorporates aspects of the culturally relevant leadership learning model (Bertrand Jones, Guthrie, & Osteen, 2016) and the experiential learning model (D. A. Kolb, 1984). An anti-deficit approach (Harper, 2012) was used to challenge the dominate narrative about Black men in college. The sample contained 15 undergraduate Black men from a predominantly White institution in the Southeastern United States. The findings suggest there are various formal and informal experiences that reinforce undergraduate Black men’s leader identity as well as experiences that enhance it. The study also brings to light numerous challenges to the experiences of Black men who are student leaders.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Black Males, Black Men, Leader Identity Development, Leadership, Leadership Development, Leadership Leadership

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

**NOTE (Advisory Committee):**Kathy Guthrie, Professor Co-Directing Dissertation; Cameron Beatty, Professor Co-Directing Dissertation; Winston Roberts, University Representative; Tamara Bertrand Jones, Committee Member; Robert Schwartz, Committee Member.

**SUBJECT:**Education, Higher

**DEGREE:**Doctoral

## Record number: 157

**FILENAME:**Steiner\_fsu\_0071E\_15342.pdf

**TITLE:**The Effects of a Single Music-Assisted Mindfulness Relaxation (Mamr) and Psychoeducation Session with Electronic Resource on Wellbeing of Informal Caregivers

**AUTHOR:**Steiner, Adrienne Claire

**MEMBER (professor directing dissertation):**Gooding, Lori F. (Lori Fogus)

**MEMBER (university representative):**Holzman, Bruce

**MEMBER (committee member):**Standley, Jayne M.

**MEMBER (committee member):**VanWeelden, Kimberly D.

**MEMBER (committee member):**Carr, Dawn C.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Music

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

**PHYSICAL DESCRIPTION:**1 online resource (97 pages)

**ABSTRACT:**Various health conditions, and/or aging can result in the need for care assistance. The number of Americans who need care assistance has grown over the past several decades, with the amount expected to increase as the number of individuals entering older adulthood rises. Informal caregivers are those who assist others with medical or other personal tasks without pay. Due to the complex demands of caregiving, informal caregivers often report high levels of stress and decreases in psychosocial wellbeing, especially when compared to those who are not caregivers. Research has indicated the need for support interventions to address informal caregivers’ needs, yet the unique needs of this population have posed challenges in developing appropriate and accessible resources. The purpose of this dissertation was to investigate the effects of a single music therapy session utilizing a music-assisted mindfulness relaxation intervention with psychoeducation session and electronic resource on psychosocial wellbeing of informal caregivers of adults with chronic health needs. Intervention data collection sessions were conducted at an adult day facility, community wellness clinic, and community church sites, and were led by a board-certified music therapist. The intervention facilitated was a music-assisted relaxation exercise utilizing research-supported live guitar accompaniment, guided breathing prompts, imagery, and a spoken mindfulness loving-kindness meditation. Following the music-assisted mindfulness relaxation (MAMR), a psychoeducation discussion was facilitated to educate participants about the techniques experienced and provide strategies for incorporating into daily life practices. Participants were given an electronic recording of the same MAMR done in the intervention session and prompted to use the resource in their preferred manner over a two-week time period. Participants, who were adults aged 62-89 and provided assistance to an individual over the age of 50 for at least five hours per week, for at least the past three months. Perceived stress and wellbeing were measured along with participants’ perception of the MAMR intervention and MAMR electronic resource. Perceived stress was measured using a researcher created tool (Likert-type scale) and wellbeing was measured using the WHO (Five) Wellbeing Index (1998 version). Subjects completed the perceived stress score before and following the intervention. The WHO wellbeing index was completed by participants prior to the intervention and two-weeks post session. Results indicated there was a significant difference between perceived stress scores prior to and following the MAMR intervention. Further analysis of perceived stress difference score indicated no difference between those who lived with the care receiver and those who did not. However, results did indicate a significant difference between those who engaged a minimum to moderate level and those who engaged at a maximum level in caregiving duties. Results of WHO wellbeing analysis also indicated a significant difference between scores from pre intervention to two-weeks post intervention. Further analysis indicated there was not a significant difference in WHO wellbeing difference scores between those who used the intervention one time or not at all, and those who used the intervention two times or more. No significant difference was found between those who lived with care receiver and those who did not, and those with minimum to moderate caregiving levels and those with maximum caregiving levels and WHO wellbeing difference scores. Participants’ perception of the intervention indicated the use of several techniques when facilitating a similar music-assisted relaxation with informal caregivers in clinical music therapy practice. The outcomes of this study warrant the need for future research to determine effective ways to use this intervention with the informal caregiving population.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**electronic resource, informal caregivers, mindfulness, music-assisted relaxation, music therapy, wellbeing

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

**NOTE (Advisory Committee):**Lori Gooding, Professor Directing Dissertation; Bruce Holzman, University Representative; Jayne Standley, Committee Member; Kimberley VanWeelden, Committee Member; Dawn Carr, Committee Member.

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

**DEGREE:**Doctoral

## Record number: 158

**FILENAME:**Sternisha\_fsu\_0071E\_15294.pdf

**TITLE:**Mechanistic Enzymological Studies of Human Glucokinase and the Development of a Biocatalyst for Chemical Synthesis

**AUTHOR:**Sternisha, Shawn M.

**MEMBER (professor directing dissertation):**Miller, Brian G.

**MEMBER (university representative):**Zhu, Fanxiu

**MEMBER (committee member):**Hoekman, Timothy

**MEMBER (committee member):**Yang, Wei

**MEMBER (committee member):**Frederich, James H.

**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 (173 pages)

**ABSTRACT:**The hexokinase (HK) family of enzymes catalyze the conversion of glucose to glucose 6-phosphate in a process that is utilized for energy production in most organisms. Hexokinase IV, commonly known as glucokinase (GCK), is functionally distinct from the rest of the HK isozymes. It is characterized by a high substrate concentration at half-maximal velocity and is not inhibited by an abundance of its product. GCK also displays positive kinetic cooperativity, despite functioning as a monomer and containing only one glucose binding site. This responsiveness is such that the inflection point occurs in the range of physiological blood glucose levels, providing the enzyme with exceptional sensitivity in this region. GCK’s unique functional properties allow it to control the rates of insulin release and glycogen synthesis. The significance of proper GCK function is emphasized by various pathological conditions that arise from mutations in the gck gene. These discoveries are expanded upon in Chapter 1 and have led to GCK being considered the glucose sensor of the body. Millisecond timescale fluctuations of the small domain have been shown to be essential for cooperativity in GCK. However, a detailed picture of GCK’s dynamic conformational landscape, including the number of accessible states, their relative populations, and the timescales on which they interconvert is absent in the literature. In Chapter 2, we map the intrinsic dynamics and structural heterogeneity of GCK on the nanosecond timescale using a combination of unnatural amino acid incorporation, time-resolved fluorescence spectroscopy and 19F nuclear magnetic resonance spectroscopy. Based on these results, we propose a catalytic model in which cooperativity originates from correlation between nanosecond and millisecond timescale motions. Activating GCK mutations abolish cooperativity and manifest themselves in the clinic as congenital hyperinsulinism. In Chapter 3, we use steady- and transient-state kinetics, and hydrogen-deuterium exchange mass spectrometry, to demonstrate that mutational activation of GCK occurs via two distinct mechanisms: α and β. Our data reveal that α-activation results from a shift in the conformational ensemble of unliganded GCK toward a state resembling the glucose-bound, closed conformation. β-type activation is instead caused by increased mobile loop dynamics, which accelerate the product release rate. This work elucidates the molecular basis of naturally occurring, activated GCK disease variants. Due to its essential role in maintaining whole-body glucose homeostasis, GCK activity is extensively regulated at virtually every level in the cell. The hormonal, metabolic, and transcriptional regulation of GCK have been described in great detail by other laboratories.1,2 Protein-protein interactions and post-translational modifications involving GCK elicit an array of physiological consequences and intrinsic conformational dynamics provide GCK with an additional layer of functional control. In Chapter 4, we offer insights into how these regulatory strategies are integrated and coordinated within the broader context of the cell. Of these regulatory mechanisms, the post-translational conjugation of the small ubiquitin-like modifier (SUMO1) protein to GCK remains one of the most poorly understood. Recently, it was reported that SUMOylation increases GCK’s activity and stability, and mediates nuclear translocation of the enzyme.3,4 However, the inability to isolate homogenous, SUMOylated proteins often inhibits full characterization of the modification. In Chapter 5 we describe our efforts to generate SUMOylated GCK using semi-synthetic and coexpression approaches. We conclude with a look to the future, emphasizing the need for continued investigation and describing future experiments. In Chapter 6, we deviate from investigations of GCK and describe our efforts to characterize CyrI, a unique iron-dependent, nonheme oxygenase. This enzyme is expressed in cyanobacteria, where it catalyzes the final step in the biosynthesis of the toxic drinking water contaminant cylindrospermopsin. CyrI catalyzes a challenging C-H oxidation step with exquisite selectivity and appears to be depend on a sulfate group as a substrate recognition motif. CyrI is intriguing to develop from a chemical synthesis perspective as the selective functionalization of C-H bonds among numerous similarly reactive C-H bonds is a considerable challenge in organic synthesis. We detail our analysis of CyrI stability and crystallization and provide insights into future experimentation.

**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):**Summer Semester 2019.

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

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

**NOTE (Advisory Committee):**Brian Miller, Professor Directing Dissertation; Fanxiu Zhu, University Representative; Timothy Cross, Committee Member; Wei Yang, Committee Member; James Frederich, Committee Member.

**SUBJECT:**Biochemistry

**SUBJECT:**Molecular biology

**SUBJECT:**Biophysics

**DEGREE:**Doctoral

## Record number: 159

**FILENAME:**Strickland\_fsu\_0071E\_15424.pdf

**TITLE:**DSM-5 Section III Personality Traits and Clinical Outcomes

**AUTHOR:**Strickland, Casey M.

**MEMBER (professor directing dissertation):**Patrick, Christopher J.

**MEMBER (university representative):**Osborn, Debra S., 1968-

**MEMBER (committee member):**Hull, Elaine M.

**MEMBER (committee member):**Joiner, Thomas, Jr.

**MEMBER (committee member):**Sachs-Ericsson, Natalie J.

**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 (87 pages)

**ABSTRACT:**The official nosology of psychiatric disorders (DSM-5) includes a primarily dimensional operationalization of personality pathology, the Alternative Model for Personality Disorders (AMPD), in its latest edition. The present study examines the impact of DSM-5 AMPD Criterion B personality traits on clinical outcomes in a sample of 185 outpatients seeking treatment at a University-based community psychology clinic. AMPD personality traits Disinhibition and Antagonism predicted an increase in missed sessions over the course of therapy, as did dimensionally-assessed borderline PD, antisocial PD, and narcissistic PD. Trait Detachment had a quadratic relationship with premature termination, where individuals in the high and low range of the Detachment distribution had increased risk of premature termination compared with individuals with moderate levels of Detachment. As in previous research, AMPD personality traits successfully predicted which individuals were diagnosed with borderline personality disorder via standard diagnostic criteria. The current study’s findings demonstrate that DSM-5 personality traits can be used to identify individuals at increased risk for missed sessions and premature termination and provide a way forward for clinicians to begin incorporating dimensional personality assessment in clinical practice.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Assessment, Personality, Treatment

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

**NOTE (Advisory Committee):**Christopher J. Patrick, Professor Directing Dissertation; Debra Osborn, University Representative; Elaine Hull, Committee Member; Thomas Joiner, Committee Member; Natalie Sachs-Ericsson, Committee Member.

**SUBJECT:**Clinical psychology

**DEGREE:**Doctoral

## Record number: 160

**FILENAME:**Su\_fsu\_0071E\_15401.pdf

**TITLE:**The Synthesis and Characterization of High Refractive Index Lens Material

**AUTHOR:**Su, Yue

**MEMBER (professor directing dissertation):**Stiegman, Albert E., 1953-

**MEMBER (university representative):**Van Winkle, David H.

**MEMBER (committee member):**Kennemur, Justin Glenn

**MEMBER (committee member):**Latturner, Susan

**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 (116 pages)

**ABSTRACT:**High refractive index polymer has always been one of the great interests for their potential in industrial applications. One of the important methods in achieving this goal is to create high cross-linking density network. Though thiol-ene reaction, multi-vinyl monomer and multi-ene monomer joint covalently to form a dense network structure. This dissertation discusses a fundamental way to develop high refractive index polymer through thiol-ebe polymerization. In the first part of this dissertation, multi-vinyl monomers and multi-thiol monomers were synthesized and mixed to make polymers using thermal initiation. Structural characterizations were performed using infrared and NMR. Thermal characterizations were performed using DSC, TGA and DMA. Optical properties like refractive indices and transmission were also measured. The results indicate that among all the phosphine polymers, PVSe-BDTH has the highest refractive index and it is among the highest refractive index organic polymer could achieve. It also has high storage modulus of several GPa. In addition to PVSe-BDTH, PVSe-EDTH is another good candidate though the introduction of EDTH made the material slightly softer. The second part of this dissertation discusses the effects of the introduction of several synthesized additives. An increasing weight percent of additives were added to the in the formation of PMMA polymer and their effects on refractive indices were examined. The third part of this dissertation discusses the positive influence of the introduction of computational method upon guiding the development of our materials. The refractive indices and densities of the previously synthesized monomers and polymers were calculated and compared with the experimental values and proved to be effective. Then the method was applied to several of our potential monomer and polymer targets, by comparing their relative refractive indices the compounds with better anticipated properties were synthesized. The experimental measurements indicate that our combination of method and basis set provide rather accurate prediction on both frequency-dependent polarizabilities and molecular volumes, therefore providing refractive indices and densities that fit our expectations. In addition to these, the calculation method can also predict IR and NMR peaks and provide possible explanation to unknown peaks. Overall, it is a useful tool in our studies in the early stages of product design and property predictions.

**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):**Summer Semester 2019.

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

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

**NOTE (Advisory Committee):**Albert E. Stiegman, Professor Directing Dissertation; David Van Winkle, University Representative; Justin G. Kennemur, Committee Member; Susan Latturner, Committee Member.

**SUBJECT:**Chemistry

**DEGREE:**Doctoral

## Record number: 161

**FILENAME:**Sun\_fsu\_0071E\_15253.pdf

**TITLE:**Online Feature Selection with Annealing and Its Applications

**AUTHOR:**Sun, Lizhe

**MEMBER (professor directing dissertation):**Barbu, Adrian G., 1971-

**MEMBER (university representative):**Kumar, Piyush, (Computer Science Professor)

**MEMBER (committee member):**She, Yiyuan

**MEMBER (committee member):**Linero, Antonio Ricardo

**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 (71 pages)

**ABSTRACT:**Feature selection is an important technique for high dimensional statistics and machine learning. It has many applications in computer vision, natural language processing, bioinformatics, etc. However, most of the feature selection methods in the literature are proposed for offline learning while the existing online feature selection methods have limitations in true feature recovery. In this dissertation, we propose some novel online feature selection methods and a framework. One is called Stochastic Feature Selection with Annealing, and the other one is the framework of running averages. Based on the methods and the framework we developed, we can recover the support of the true features with higher accuracy. We provide a theoretical analysis, and through simulations and experiments on real sparse datasets, we show that our proposed methods compare favorably with some state-of-the-art online methods in the literature.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Data Streaming, Feature Selection, Online Learning

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

**NOTE (Advisory Committee):**Adrian Barbu, Professor Directing Dissertation; Piyush Kumar, University Representative; Yiyuan She, Committee Member; Antonio Linero, Committee Member.

**SUBJECT:**Statistics

**DEGREE:**Doctoral

## Record number: 162

**FILENAME:**Surmaitis\_fsu\_0071E\_15315.pdf

**TITLE:**Cell Adhesion Behavior and Protein-Surface Interactions on Polyelectrolyte Multilayer Thin Films

**AUTHOR:**Surmaitis, Richard L.

**MEMBER (professor directing dissertation):**Schlenoff, Joseph B.

**MEMBER (university representative):**Locke, Bruce R.

**MEMBER (committee member):**Kennemur, Justin Glenn

**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 (137 pages)

**ABSTRACT:**Polyelectrolyte multilayer thin films have been used as coatings due to their biocompatibility for cell culture experiments. During layer-by-layer assembly of these multilayer thin films, the film is altered by adjusting the salt concentration, the rinsing time, and the temperature which changes the morphology of the film. Certain factors such as surface charge and the polymer effect the biocompatibility of the film and its ability to adsorb serum proteins. If cells adhere and proliferate on a film it is called ‘cytophilic’. Conversely, if cells do not adhere to a film or undergo apoptosis on the film, the surface is called ‘cytophobic’. Cell behavior was discussed in this dissertation for polyelectrolyte multilayers composed of the polycations; poly(diallyldimethylammonium), PDADMAC, and poly(allylammonium chloride), PAH, and polyanions; poly(4-styrenesulfonic acid), PSS, and poly(acrylic acid), PAA. The adhesion and proliferation of cells are dependent on the surface to which they attach. Aside from cell counting, cell “health” on surfaces is typically established by measuring the metabolic rate with dyes that participate in the metabolic pathway or using “live/dead” assays with combinations of membrane permeable/impermeable dyes. Whether cells are attached or not, and whether they are living or dead, provides an incomplete picture of cell health. In this dissertation, proliferation rates and net metabolism of 3T3 fibroblasts seeded on “biocompatible” ultrathin polyelectrolyte multilayer films and on control tissue culture plastic were compared. Cells adhered to, and proliferated on, both surfaces, which were shown to be nontoxic according to live/dead assays. However, adhesion was poorer on the multilayer surface, illustrated by diffuse organization of the actin cytoskeleton and less-developed focal adhesions. Proliferation was also slower on the multilayer. When normalized for the total number of cells, it was shown that cells on multilayers experienced a five-day burst of metabolic stress, after which the metabolic rate approached that of the control surface. This initial state of high stress had not been reported previously in studies of cell growth on multilayers, although the observation period for this system was usually a few days. The interaction of nanoparticles and surfaces with the complex array of proteins in physiological media is largely responsible for maintaining circulation in the bloodstream and biocompatibility in general. It is known that composition of the initial “soft” corona of exchangeable adsorbed proteins evolves to comprise a more tenaciously held “hard” corona. In this dissertation, the dependence of cell adhesion on a thin film of polyelectrolyte complex is connected to the “hardness” of the initial corona using albumin, the most prevalent protein in serum. The ease with which albumin can be displaced depended on the surface functional group - carboxylate or sulfonate, in particular aromatic sulfonate. Carboxylate permitted easier exchange of albumin, which presumably allowed the adsorption of proteins such as fibronectin, required for cell adhesion. Sulfonate held on to albumin more strongly, producing a persistent hard corona likely to remain biocompatible. The mechanism is thought to be related to the higher energy of interaction between sulfonate and amine than between carboxylate and amine.

**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):**Summer Semester 2019.

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

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

**NOTE (Advisory Committee):**Joseph B. Schlenoff, Professor Directing Dissertation; Bruce R. Locke, University Representative; Justin G. Kennemur, Committee Member; Lei Zhu, Committee Member.

**SUBJECT:**Chemistry

**DEGREE:**Doctoral

## Record number: 163

**FILENAME:**Swanson\_fsu\_0071E\_15281.pdf

**TITLE:**Is State Safety Net Capacity Adequate to Meet Basic Needs?

**AUTHOR:**Swanson, Jeffrey V.

**MEMBER (professor directing dissertation):**Barrilleaux, Charles

**MEMBER (committee member):**Coleman, Eric A., (Professor of Political Science)

**MEMBER (committee member):**Weissert, Carol S.

**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 (103 pages)

**ABSTRACT:**This dissertation consists of three individual studies on the role of state governments in social welfare. The first paper discusses the relationship between gubernatorial administrative capacity and the ability for Democrats to increase social welfare spending after the state has experienced an economic downturn. Using panel data for 49 US states from 1987 to 2014, I examine whether budgetary authority allows governors to respond to an economic contraction in the expected partisan matter. I find evidence to support the view that governors shape budget policy in a manner that is consistent with their preferences. The second paper is on the decentralization of Medicaid and Aid to Families with Dependent Children (AFDC)/Temporary Assistance for Needy Families (TANF) by the national government to the state governments to see if the programs were made worse off in performing their goal of poverty alleviation. Decentralization is measured using expenditure ratios of state general fund spending to federal government spending. I find that more state involvement in Medicaid reduces expected poverty growth even after controlling for state economic, political, and demographic factors. Although no effect was found from AFDC/TANF decentralization, the results do demonstrate a positive impact from more state involvement in Medicaid. The final study is on the impact of social assistance programs on infant health. Infant mortality rates are an important indicator of population health. The primary goal of this chapter is to serve as an evaluation of government redistributive programs and population health. Do the outputs of social assistance programs reach their intended beneficiaries? I find that increased Supplemental Nutrition Assistance Program (SNAP) and TANF benefit generosity within states has a negative association with overall infant mortality after controlling for economic development and additional factors related to infant health.

**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):**Summer Semester 2019.

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

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

**NOTE (Advisory Committee):**Charles Barrilleaux, Professor Directing Dissertation; Katrinell Davis, University Representative; Eric Coleman, Committee Member; Carol Weissert, Committee Member; William G. Weissert, Committee Member.

**SUBJECT:**Public policy

**SUBJECT:**United States--Study and teaching

**DEGREE:**Doctoral

## Record number: 164

**FILENAME:**Tabbaa\_fsu\_0071E\_15376.pdf

**TITLE:**Mechanisms of Oxytocin Regulation of Sensory Processing and Sociality in Mice and Humans

**AUTHOR:**Tabbaa, Manal

**MEMBER (professor directing dissertation):**Hammock, Elizabeth Anne Dunn

**MEMBER (university representative):**Gunjan, Akash

**MEMBER (committee member):**Patrick, Christopher J.

**MEMBER (committee member):**Wang, Zuoxin

**MEMBER (committee member):**Stanwood, Gregg

**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 (167 pages)

**ABSTRACT:**Social behaviors are foundational to our society and quality of life while social behavioral deficits are core symptoms in a variety of psychopathologies. Yet, despite the significance for human health, the neural mechanisms that regulate social behavior are incompletely characterized. Oxytocin (OXT) is a neuro-active hormone that has been well-studied over the last several decades and shown to regulate social behaviors. The OXT system interacts with early life environment and an individual’s genotype to regulate social behaviors in a sexually dimorphic manner. Chapter 1 describes background information on the role of OXT in social behaviors. Thereafter, research on the developmental role of OXT is discussed. Chapter 1 ends with the proposal of a novel mechanism by which socially acquired OXT may regulate social behaviors. In chapters 2-5, experiments are described which aim to empirically test this central hypothesis. In chapter 2, a functional role for oxytocin receptors (OXTR) in the oronasal cavity were investigated in developing mice as a potential mechanism by which OXT can interact with early life sensory experience to regulate brain activity and behavior. OXTRs have recently been characterized in the periphery of developing mice that appear to be located on sensory apparatuses. We tested the effects of orally applied OXT, compared to saline, on a marker of neural activation, c-Fos, in sensory processing brain regions and the paraventricular nucleus of the hypothalamus (PVN). To test the effects of orally applied OXT on sensory-dependent brain activity, we also brushed the whiskers of mice after OXT or saline treatment in a separate experiment. Orally administered OXT, compared to saline, increased c-Fos in the PVN, and decreased c-Fos activity in sensory processing brain regions after whisker brushing. Additionally, orally applied OXT, compared to saline, with whisker brushing decreased Fos in the trigeminal motor nucleus as well as oral-motor behavior of females. Compared to saline, oral OXT with whisker brushing also increased males long distance locomotor behavior. These data support the possibility of a functional role for OXT acting on oronasal OXTR to modulate the brain and behavior in developing mice. In chapter 3, the idea of OXT exchange between conspecifics as a potential driver of social behaviors was tested by examining the preference of male and female mice towards OXT containing social stimuli. Male and female mice showed a preference to investigate same-sex mice that contained OXT versus OXT knock-out (KO) mice. Next, we tested if mice prefer OXT KO bedding containing OXT versus saline and found that males prefer female OXT KO bedding with OXT compared to saline. Finally, we tested the role of OXTR in sensory ganglia in the social preference of live mice by using transgenic mice breeding strategies to selectively knock out OXTR in sensory ganglia. We found that female mice lacking sensory OXTR (OXTRsensory KO) had reduced social investigation levels compared to their wild-type (OXTRsensory WT) litter mates. The role of OXTR in sensory ganglia in social behaviors was further tested in chapter 4 by examining sociability, preference for social novelty, and aggression in OXTRsensory WT and KO mice. OXTRsensory KO females had reduced approach behaviors during the sociability test, compared to OXTRsensory WT females. Altogether, data from chapters 2-4 indicate that environmentally acquired OXT can regulate brain activity and influence behaviors. In addition, mice preferred other mice that contain OXT over OXT KO mice, but not same-sex OXT KO bedding with OXT over saline. These data suggest that preference for an OXT containing live same-sex conspecific may be due to an interaction between OXT and social sensory signals rather than OXT alone. Lastly, these data indicate that OXTRs in sensory ganglia are an important regulator of social behaviors, particularly for females. Finally, in chapter 5, we aimed to explore the translational significance of these findings by examining if variation in the OXTR gene is associated with variation in social sensory processing in humans, with significance for trait meanness. We genotyped the common OXTR single nucleotide polymorphisms (SNPs) rs1042778 and rs53576 in male and female participants that had brain event related potentials (ERP) recorded in response to viewing affective faces. We found that females homozygous for the OXTR SNP rs1042778 G allele had enhanced fear-specific brain responses compared to T allele carriers. Additionally, the rs53576 A allele was associated with higher ERP amplitudes to face stimuli, but not scrambled faces, compared to GG allele carriers. Further, OXTR SNPs rs1042778 and rs53576 interacted to predict trait meanness in females. These data implicate OXTR gene variability in the etiology of sensory processing variation in the brain as well as trait meanness. A summary of results as well as implications and suggestions for future research are discussed in chapter 6.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Development, Oxytocin, oxytocin receptor single nucleotide polymorphism, Psychopathy, Sensory, Social beahvior

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

**NOTE (Advisory Committee):**Elizabeth A. D. Hammock, Professor Directing Dissertation; Akash Gunjan, University Representative; Christopher J. Patrick, Committee Member; Zuoxin Wang, Committee Member; Gregg Stanwood, Committee Member.

**SUBJECT:**Neurosciences

**SUBJECT:**Biology

**DEGREE:**Doctoral

## Record number: 165

**FILENAME:**Terry\_fsu\_0071N\_15355.pdf

**TITLE:**An Examination of Faunal Resource Use and Feasting Activity at Shields Mound (8Du12), Jackonsville, Florida

**AUTHOR:**Terry, Samantha

**MEMBER (professor directing thesis):**Marrinan, Rochelle A.

**MEMBER (committee member):**Halligan, Jessi J.

**MEMBER (committee member):**Peres, Tanya 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 (105 pages)

**ABSTRACT:**This study will examine St. John’s II period subsistence practices along the St. John’s River through faunal analysis of archaeological material from the Shields Mound site (8DU12). Shields Mound, and the nearby Grant Mound, were originally excavated by C.B. Moore in 1893. His excavations focused on describing the appearance and features of the mounds, as well as, providing a detailed description of the stratigraphic changes encountered during excavation of the main mound and the artifacts that were discovered. Between 1999 and 2002, Keith Ashley, revisited the site to gain a better understanding of the village area associated with the mounds, as this was not a focus of Moore’s excavation. Ashley (2005) determined the mounds were representative of the St. John’s II period (A.D. 900-1250). His research focused on introducing the Mill Cove Complex within which Shields Mound is located and developing an understanding of the site in general. A 2005 issue of The Florida Anthropologist was dedicated to findings from the Mill Cove Complex. Marrinan (2005) completed faunal analysis from three distinct shell midden locations of the site: Kinsey’s Knoll, Bluff Midden, and Reeve’s Rise. Rolland (2005) additionally analyzed the ceramics that were discovered during excavations to determine what types were most prominent in the assemblages. Penders (2005) contributed to the understanding of the site through an analysis of bone, antler, tooth, and shell artifacts from the features that were excavated. Since 2005, Ashley and students have returned to the Shields Mound area and excavated additional samples. A primary goal of this study, therefore, is to utilize the information from these studies, as well as additional research, to determine if ritual activity, specifically feasting activity, was occurring at Shields Mound. I will utilize data from additional locations in the vicinity of Shields Mound and compare these data with criteria proposed by Jackson and Scott (1995) on feasting at an inland site. I will also consider any additional evidence, such as quantity and size of ceramic vessels, quantity of artifacts discovered, and the role of prestige or high-status species diversification, in my analysis to determine if ritual activity was occurring at Shields.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Faunal Analysis, Feasting, Mill Cove Complex, Shield's Mound, Zooarchaeology

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

**NOTE (Advisory Committee):**Rochelle A. Marrinan, Professor Directing Thesis; Jessi L. Halligan, Committee Member; Tanya M. Peres, Committee Member.

**SUBJECT:**Archaeology

**DEGREE:**Masters

## Record number: 166

**FILENAME:**Tevlin\_fsu\_0071E\_15323.pdf

**TITLE:**Are Individuals with Head Injury More Likely to Offend? : the Integration of Head Injury with Popular Criminological Constructs

**AUTHOR:**Tevlin, Cassidy A.

**MEMBER (professor directing dissertation):**Gertz, Marc G.

**MEMBER (university representative):**Jones, Maxine Deloris

**MEMBER (committee member):**Bales, William D.

**MEMBER (committee member):**Stewart, Eric Allen

**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 (235 pages)

**ABSTRACT:**Traumatic head injury is associated with an array of antisocial behavior. Furthermore, head injury is associated with many of the antisocial risk factors identified in the criminological literature. To date, no research has attempted to incorporate measures of head injury into existing criminological theories. The aim of this study is to investigate the connection between head injury and antisocial behavior by attempting to incorporate head injury into four of the most popular criminological theories. This is done by examining the interaction effects between head injury and the various constructs that make up social learning theory, general strain theory, social bond theory, and the general theory of crime. Several of key findings are discussed, and suggestions for future research and theoretical development are considered.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**June 7, 2019.

**NOTE (Keywords):**general strain theory, general theory of crime, head injury, self-control, social bond theory, social learning theory

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

**NOTE (Advisory Committee):**Marc G. Gertz, Professor Directing Dissertation; Maxine D. Jones, University Representative; William D. Bales, Committee Member; Eric A. Stewart, Committee Member.

**SUBJECT:**Criminology

**DEGREE:**Doctoral

## Record number: 167

**FILENAME:**Thorne\_fsu\_0071E\_15082.pdf

**TITLE:**Predictors of Willingness to Seek Psychological Help and Perceived Stigma among Rural People

**AUTHOR:**Thorne, Kendra L. (Kendra Lee)

**MEMBER (professor directing dissertation):**Ebener, Deborah J.

**MEMBER (committee member):**Jenkins, Lyndsay Nicole

**MEMBER (committee member):**Becker, Martin Swanbrow

**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 (164 pages)

**ABSTRACT:**Up to 37% of United States adults experience psychological distress at clinically high levels; however, the majority of them do not seek psychological help. Reluctance to seek help is exacerbated in rural culture, as rural people are less likely to seek psychological help than urban people. A review of the literature revealed that one highly prevalent rural factor that may affect help-seeking is perceived stigma. Rural emphasis on self-reliance and religiosity, limited knowledge of mental illness, and confidentiality concerns are all stigma-related variables that have been shown to influence rural people’s decision to seek help. Prior to the current study, the influence of perceived stigma in the link between psychological distress and willingness to seek psychological help had not been examined specifically among rural people. Further, many of the existing studies on stigma-related factors examined one factor at a time and are of qualitative nature. Within a rural-only sample, the current study examined the moderating effect of perceived stigma between psychological distress and willingness to seek psychological help. Also, this study examined the predictive abilities of self-reliance, religiosity, confidentiality concerns, and knowledge of mental illness when predicting perceived stigma and willingness to seek psychological help. Findings of this study suggest that knowledge of mental disorders is most influential on rural willingness to seek psychological help – more so than self-reliance, confidentiality concerns, and religiosity. Further, confidentiality concerns emerged as most impactful on perceived stigma among rural adults – more so than knowledge of mental disorders, self-reliance, and religiosity. Greater knowledge was associated with more help-seeking willingness, and greater confidentiality concerns were associated with more perceived stigma. However, perceived stigma was not significantly related to willingness to seek psychological help, nor did it moderate the relation between psychological distress and willingness to seek psychological help. Interestingly, greater psychological distress experienced by rural people was associated with less willingness to seek psychological help, suggesting a reverse relation between distress and help-seeking than that found in the general population. Clinical consideration of study findings may help combat the unique challenges associated with help-seeking in rural communities – challenges viewed by some mental health professionals as unsolvable or hopeless. As knowledge of mental disorders and confidentiality concerns emerged as the most important factors in willingness to seek psychological help and perceived stigma, respectively, interventions aimed to target these two factors may improve acceptability and utilization of rural mental healthcare. Integration of mental health education into primary care and community outreach partnerships (with churches, organizations, etc.) may positively influence rural adults’ willingness to seek psychological help. Further, discussing manners of maintaining confidentiality during the aforementioned educational interventions may help ease perceived stigma toward mental illness among rural residents. As mental health providers can work to improve mental health literacy and confidentiality concerns, findings of this study suggest that rural mental health challenges may not be as “unsolvable” as previously believed.

**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):**April 3, 2019.

**NOTE (Keywords):**help-seeking, mental healthcare, rural, stigma

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

**NOTE (Advisory Committee):**Deborah Ebener, Professor Directing Dissertation; Anne Barrett, University Representative; Lyndsay Jenkins, Committee Member; Martin Swanbrow Becker, Committee Member.

**SUBJECT:**Counseling psychology

**DEGREE:**Doctoral

## Record number: 168

**FILENAME:**Timm\_fsu\_0071N\_15215.pdf

**TITLE:**Language Input Intervention: Quantity and Quality of Caregiver Language Interactions with Young Spanish-English Speaking Children

**AUTHOR:**Timm, Catherine Christine

**MEMBER (professor directing thesis):**Wood, Carla, (Speech-Language Pathology Professor)

**MEMBER (committee member):**Hall-Mills, Shannon S.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Communication and Information

**CORPORATE NAME:**Department of Communication Science Disorders

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

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

**ABSTRACT:**This study examined the quantity and quality of language interactions between young Spanish-English speaking children and their caregivers during book sharing in two conditions: with and without feedback on quantity of adult language input. The intervention used a wearable word-counter that provided synchronous visual displays on a smartphone application. Interactions were identified and transcribed from day-long LENA recordings. Descriptive analysis compared caregiver language in book sharing, before and during a language intervention intended to increase caregivers’ awareness of the quantity of language delivered to their children. An increase in quantity and quality of language was anticipated due to the addition of feedback on adult language interactions, however results indicated inconsistency in the increase of quantity and quality of language. From this study clinicians, teachers, and families can observe how a self-monitored quantitative language intervention does not independently impact quantity and quality of caregiver’s language during book sharing.

**NOTE (Submitted Note):**A Thesis submitted to the Department of Communication Science Disorders 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):**bilingual children, Caregiver language, dual language learner, Input intervention, quantitative intervention, quantity and quality

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

**NOTE (Advisory Committee):**Carla Wood, Professor Directing Thesis; Shannon Hall-Mills, Committee Member; Andrea Barton-Hulsey, Committee Member.

**SUBJECT:**Speech therapy

**DEGREE:**Masters

## Record number: 169

**FILENAME:**Tingir\_fsu\_0071E\_15106.pdf

**TITLE:**Evaluating the Effectiveness of the Expectation-Maximization (EM) Algorithm for Bayesian Network Calibration

**AUTHOR:**Tingir, Seyfullah

**MEMBER (professor directing dissertation):**Almond, Russell G.

**MEMBER (university representative):**Sinha, Debajyoti

**MEMBER (committee member):**Becker, Betsy Jane, 1956-

**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 (84 pages)

**ABSTRACT:**Educators use various statistical techniques to explain relationships between latent and observable variables. One way to model these relationships is to use Bayesian networks as a scoring model. However, adjusting the conditional probability tables (CPT-parameters) to fit a set of observations is still a challenge when using Bayesian networks. A CPT provides the conditional probabilities of a single discrete variable with respect to other discrete variables. In general Bayesian networks, the CPTs that link the proficiency variable and observable outcomes are not necessarily monotonic, but they are often constrained to be monotonic in educational applications. The monotonicity constraint states that if an examinee shows an improvement on a proficiency variable (parent variable), the individual performance on an observable (child variable) should improve. For example, if a student has a higher writing skill, then this student is likely to score better on an essay task. For educational research, building parametric models (i.e., DiBello models) with the Expectation-Maximization algorithm provides monotonic conditional probability tables (CPT). This dissertation explored the effectiveness of the EM algorithm within the DiBello parameterization under different sample sizes, test forms, and item structures. The data generation model specifies two skill variables with a different number of items depending on the test forms. The outcome measures were the relative bias of the parameters to assess parameter recovery, Kullback-Leibler distance to evaluate the distance between CPTs, and Cohen’s κ to assess classification agreement between data generation and estimation models. The simulation study results showed that a minimum sample size of 400 was sufficient to produce acceptable parameter bias and KL distance. A balanced distribution of simple and integrated type items produced less bias compared to an unbalanced item distribution. The parameterized EM algorithm stabilized the estimates for cells small sizes in CPTs, providing minimal KL distance values. However, the classification agreement between generated and estimated models was low.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Bayesian networks, educational assessment, monotonicity, parameterized networks

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

**NOTE (Advisory Committee):**Russell G. Almond, Professor Directing Dissertation; Debajyoti Sinha, University Representative; Betsy J. Becker, Committee Member; Yanyun Yang, Committee Member.

**SUBJECT:**Educational tests and measurements

**SUBJECT:**Educational psychology

**SUBJECT:**Education

**DEGREE:**Doctoral

## Record number: 170

**FILENAME:**Tooley\_fsu\_0071E\_15403.pdf

**TITLE:**Images of Uncertainty: The Hallucinatory Simulacra in Post-1960s Fiction and Film

**AUTHOR:**Tooley, Thomas Charles, III

**MEMBER (professor directing dissertation):**Epstein, Andrew, 1969-

**MEMBER (university representative):**Wakamiya, Lisa Ryoko, 1969-

**MEMBER (committee member):**Gontarski, S. E.

**MEMBER (committee member):**Faulk, Barry 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 (240 pages)

**ABSTRACT:**Critical examinations of the simulacrum have frozen, due in part to the overabundance and simplified applications of Jean Baudrillard’s canonical theories. In a 2003 book review, David Banash voices this frustration, identifying “surprisingly little nuance” in the handling of “Baudrillard’s theory of simulation.” He faults critics and scholars who generally “treat [Baudrillard’s] work as if it were an objective description of the world,” as if “somehow DeLillo offers a kind of proof for Baudrillard.” We can note a similar dynamic at play in criticisms that evaluate postmodern literature according to Fredric Jameson’s definition of the postmodern condition, or the “cultural logic of late capitalism.” He too distinguishes postmodern aesthetics as reducing historical, critical, ethical work into “pseudo-events.” Though aligned with two different theoretical “schools,” both Baudrillard and Jameson offer a “nihilistic” account of postmodernism. In “apocalyptic” gestures, they situate the opportunity for genuine subversive art in the past, marking postmodern aesthetics as the end of all critical productivity. In this dissertation, however, I argue that postmodern authors and filmmakers employ the simulacrum for a purpose that till now has gone overlooked by the critical trend that prioritizes these theories and approaches. Through close readings and historical accounts of key texts from Thomas Pynchon, Don DeLillo, Toni Morrison, and David Lynch, I demonstrate how simulacral imagery also works to raise our awareness of the constructed nature of authenticity. Employed in this alternative function, the simulacrum does not contribute to the total evacuation of meaning. Rather, it both installs and subverts traditional “realist” methods of representation. The simulacral imagery in these works tempt us to read them according to traditional, rational reading practices, which would lead us to assign authenticity to representations based on preexisting cultural convention. Yet, by simultaneously undermining the authority of those conventions, these simulacra reveal how authenticity exists as a cultural value, a device laden with political significance and derived from the combination of various aesthetic elements. In this more recalcitrant way, the simulacrum resists and denaturalizes the conventions for representation that encourage dominant systems of power. I title these the “hallucinatory simulacrum” in order to underscore this imagery as contrary to traditional veridical modes of representation.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Authenticity, Hallucinatory, Postmodernism, Simulacra, Uncertainty

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

**NOTE (Advisory Committee):**Andrew Epstein, Professor Directing Dissertation; Lisa Wakamiya, University Representative; S.E. Gontarski, Committee Member; Barry Faulk, Committee Member; Aaron Jaffe, Committee Member.

**SUBJECT:**British literature

**SUBJECT:**Irish literature

**SUBJECT:**English literature

**SUBJECT:**Motion pictures

**DEGREE:**Doctoral

## Record number: 171

**FILENAME:**Torres\_fsu\_0071E\_15207.pdf

**TITLE:**Ella Creyó Que Podía, Así Que Lo Hizo Exploring Latina Leader Identity Development through Testimonio

**AUTHOR:**Torres, Maritza

**MEMBER (professor directing dissertation):**Guthrie, Kathy L.

**MEMBER (university representative):**Poey, Delia

**MEMBER (committee member):**Jones, Tamara Bertrand

**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 (155 pages)

**ABSTRACT:**In teaching leadership and leader identity development to Latina undergraduate women, it is imperative their salient identities are addressed and acknowledged. The teaching of standardized forms of leadership and the deconstruction of established leadership principles and paradigms also need to be taken into consideration. Leadership educators need to create spaces in which Latina undergraduate students can thrive in classroom environments, student organizations, and programs. Because leadership is understood through an American cultural lens, reflection and meaning-making should be encouraged to integrate identity and culture within the realm of leader identity development. Through these experiences, the Latina leader identity development can be further reinforced. This study explored the leader identity development of Latina undergraduate women via testimonio as methodology (Huber, 2009; Reyes & Rodríguez, 2012). The culturally relevant leadership learning model (CRLL) (Bertrand Jones, Guthrie, & Osteen, 2016) and the women’s leader identity development model (WLID) (Le Ber, LaValley, Devnew, Berghout Austin, Elbert, Sulpizio, & Tremaine, 2017) were used as conceptual frameworks. A sample of 12 self-identified Latina undergraduate women who were also involved in a student organization in any capacity and/or had taken a leadership class participated in the study. Participants were asked to write a testimonio regarding their leadership journey in college, and a follow up interview took place discussing their testimonio and their leader identity development. Based on the themes that emerged in the study, Latina undergraduate women developed their leader identity through leadership experiences, leadership courses, and various involvements on campuses. Participants indicated the importance of a culturally relevant campus climate and support from faculty, staff, and peers in their leader identity development. Aspects of the CRLL and WLID models were applicable to their experiences, and participants were able to provide recommendations to faculty and staff on how to help Latina undergraduate women develop their leader identity in college.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Identity, Latina Students, Latinx Leadership, Latinx Students, Leadership, Leadership learning

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

**NOTE (Advisory Committee):**Kathy L. Guthrie, Professor Directing Dissertation; Delia Poey, University Representative; Tamara Bertrand Jones, Committee Member; Lara Perez-Felkner, Committee Member.

**SUBJECT:**Education, Higher

**SUBJECT:**Latin America

**DEGREE:**Doctoral

## Record number: 172

**FILENAME:**Turkewitz\_fsu\_0071E\_15370.pdf

**TITLE:**A Defense of Semantic Vagueness

**AUTHOR:**Turkewitz, Joshua Ripley

**MEMBER (professor directing dissertation):**Kearns, Stephen, 1979-

**MEMBER (university representative):**Kaschak, Michael P.

**MEMBER (committee member):**Clarke, Randolph K.

**MEMBER (committee member):**Rawling, Piers

**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 (93 pages)

**ABSTRACT:**This dissertation defends the position that vagueness is semantic – a feature of language and thought alone. In order to do so, I argue that vagueness is genuine; that it cannot be reduced to ignorance. I then refute three arguments that semantic vagueness, if genuine, must extend to features of the world that are not representations. Lastly, I argue that, although we might take representations to be examples of a type of metaphysical vagueness, semantic vagueness, even if in some sense metaphysical, does not suffer from the pernicious aspects attributable to other forms of metaphysical vagueness. I argue that epistemicism is troubled by fine-grained phenomenal sorites series in which adjacent objects are indistinguishable. To avoid contradiction the epistemicist must say either that adjacent objects in the series do not appear the same as their neighbors or that an undetectable difference in appearance makes a psychological difference to how the objects appear. Both options are implausible. The supervaluationist is more easily able to resolve the difficulty by appealing to extant fundamental aspects of her theory. Next, I discuss a dilemma Ken Akiba (2004) presses against supervaluationism based on the nature of reference. He argues that reference is either deflationary or inflationary, but if deflationism is true then there cannot be semantic vagueness because there is no substantive reference. I argue that this is false – reference need not be substantive to be imprecise. The second horn claims that if inflationism is true then reference is constituted by indeterminate physical connections so an inflationary supervaluationist must already accept physical indeterminateness. I argue that this is also false – an inflationary supervaluationist can, for principled reasons, constrain the indeterminateness at issue in the semantic domain. Neither horn of Akiba’s dilemma is sharp. Many theorists of vagueness hold that vagueness is mind-dependent, that vagueness is due either to imprecise representation of a precise world or ignorance of representational (and worldly) precision. Recently Trenton Merricks (2001 and 2017) has launched two offensives against this cluster of views that he dubs the orthodoxy. He argues that (2001) if there is linguistic vagueness it is either epistemic or a species of metaphysical vagueness and that (2017) there are mind-independent examples of vagueness – vagueness that is due neither to representational imprecision or ignorance. This chapter defends the orthodoxy from Merricks’ arguments. I contend that his (2001) argument conflates garden-variety ambiguity with vagueness, and so can be met by the standard supervaluationist approach to vagueness, and that his (2017) argument relies on the claim that for every predicate there is a corresponding property, which is both implausible and will already be rejected by those who believe that vagueness is mind-dependent. Finally, I argue that two concerns facing metaphysical vagueness, that of it’s alleged unintelligibility and that it objectionably entails indeterminate identity, can be mollified for representational theories of vagueness that count representations as metaphysical entities.

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

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

**NOTE (Date of Defense):**June 21, 2019.

**NOTE (Keywords):**Epistemicism, Indeterminism, Metaphysics, Supervaluationism, Vagueness

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

**NOTE (Advisory Committee):**Stephen Kearns, Professor Directing Dissertation; Michael Kaschak, University Representative; Randolph Clarke, Committee Member; J.PiersRawling, Committee Member.

**SUBJECT:**Philosophy

**SUBJECT:**Metaphysics

**DEGREE:**Doctoral

## Record number: 173

**FILENAME:**Uehling\_fsu\_0071N\_15438.pdf

**TITLE:**Describing the Onset and Demise of the Australian Monsoon

**AUTHOR:**Uehling, John Edward

**MEMBER (professor directing thesis):**Misra, Vasubandhu, 1970-

**MEMBER (committee member):**Hart, Robert E. (Robert Edward), 1972-

**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 (80 pages)

**ABSTRACT:**A comprehensive rainfall-based index of the Australian monsoon is created. This index is based on methodology previously used on the Indian subcontinent for determining the seasonality of the Indian monsoon. In order to create the Australian monsoon index, only rainfall data is used, which even over the sparsely populated areas of northern Australia is available dating back over 100 years (to 1901). The methodology for calculating the Australian monsoon index has been shown to be robust and not susceptible to false onsets. The Australian monsoon index objectively captures the onset date, the demise date, and the total seasonal rainfall for each monsoon season. This new index was then compared to various atmospheric dynamic and thermodynamic variables to see if the index was reflective of the broader seasonal atmospheric changes associated with the monsoon. The Australian monsoon index introduced in this study is found to be consistent with the meridional advancement of the precipitable water south of the equator and over the Australian land mass as the monsoon season begins. Atmospheric dynamics related to the low-level wind data shows a pronounced wind shift across the region corresponding to the onset and the demise of the monsoon based on the rainfall index. The examination of linear trends show that the length of the season has gotten longer and wetter, with earlier onsets and later demises since the beginning of the 20th century. One final aspect of the monsoon that is investigated is the interannual variability of the monsoon and how the El Niño-Southern Oscillation (ENSO) impacts the onset, demise, length of season, and total rainfall of the Australian monsoon. It is observed that warm or cold ENSO events are associated with shorter or longer Australian monsoon season, respectively. Similarly, these warm or cold ENSO events are associated with drier or wetter seasonal rainfall anomalies of the Australian monsoon, respectively.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Australia, Demise, ENSO, Monsoon, Onset, Rainfall

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

**NOTE (Advisory Committee):**Vasubandhu Misra, Professor Directing Thesis; Robert Hart, Committee Member; Allison Wing, Committee Member.

**SUBJECT:**Atmospheric sciences

**DEGREE:**Masters

## Record number: 174

**FILENAME:**UrenaSalas\_fsu\_0071E\_15329.pdf

**TITLE:**The Disablement Process of Aging United States Veterans

**AUTHOR:**Urena Salas, Stephanie

**MEMBER (professor directing dissertation):**Taylor, Miles G., 1976-

**MEMBER (university representative):**Joiner, Thomas, Jr.

**MEMBER (committee member):**Quadagno, Jill S.

**MEMBER (committee member):**Carr, Dawn C.

**MEMBER (committee member):**McFarland, Michael J., (Sociology professor)

**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 (115 pages)

**ABSTRACT:**Older United States (U.S.) veterans are a population at risk for disability due to their early life experiences with military service and increasing age. Military service was a normative part of early adult life for today’s older U.S. population, bringing the number of veterans aged 60 and older in 2015 to over 9.3 million. Despite older veterans’ lived experience, substantial population size, and potential impact on the U.S. health care system, the details of their later-life disability experience are not well understood. The following project uses the nationally representative, longitudinal Health and Retirement Study (HRS) to examine the role of veteran status on the disablement process of veterans compared to nonveterans over a decade (2004-2014), including an exploration of the underlying life course mechanisms influencing disablement, with the goal of providing a recent look at the long-term physical health consequences of military service. Chapter 3 establishes the occurrence of an observable veteran health paradox among HRS respondents 60 years and older. I unpack the components of the disablement process of veterans compared to nonveterans by creating separate baseline 10-year trajectories for number of chronic conditions, disability, and mortality, including veteran status, age, race, and father’s education in the model. Three different disability trajectories were measured to capture the gradual progression and severity of disability: functional limitations (FLs), instrumental activities of daily living (IADLs), and activities of daily living (ADLs) which are considered the most severe manifestation of disability. The trajectories depict counterintuitive results: veterans have more chronic conditions but less self-reported FLs, IADLs, and ADLs compared to nonveterans. This finding stands in contrast to the progression of disablement described by Verbrugge and colleagues in the aging and disability literature. Veterans in this sample are also observed to experience a marginally lower risk of mortality at baseline but a significantly greater increasing risk of mortality over time compared to nonveterans, such that veterans have a survival deficit over the majority of the analytic period. The results of more chronic conditions, lower disability, and higher mortality suggest that veterans may die from diseases rather than becoming disabled. These findings are counterintuitive to the traditional disablement process and strongly suggest a veteran health paradox. Chronic conditions appear to play a crucial role within the disablement process of veterans, and they may hold answers to their overall disablement experience, so they are further tested in Chapter 4. Chapter 4 uses the same analytic sample from Chapter 3 to conduct a closer examination of chronic conditions and their role in the observed veteran health paradox. An interaction term for number of chronic conditions and veteran status (chronic conditions \* veteran status) along with sociodemographic predictors and life course pathways are added to the trajectory models, which are also run separately with dichotomous variables of seven specific chronic conditions (arthritis, cancer, diabetes, heart disease, hypertension, lung disease, and stroke) and their corresponding interaction with veteran status (specific chronic condition \* veteran status). The findings suggest that veterans have less disability despite having more chronic conditions than nonveterans. Veterans, specifically those who self-reported having chronic conditions, seem to have an initial advantage in mortality that diminishes to meet the level of mortality for nonveterans by the end of the analytic period. Further inspection of chronic conditions and life course mechanisms suggest the interaction between veteran status and chronic conditions is driving the effects, with arthritis, diabetes, and heart disease standing out as significant in translating to lower disability (i.e. functional limitations) for veterans compared to their nonveteran counterparts. Exploration of covariates and life course pathways establish socioeconomic status, marriage, and health care access as independently protective mechanisms by which veterans fare better in the disablement process than nonveterans. These findings support the existence of an observed veteran health paradox within the sample and further highlight that the early stages of the disablement process play a key role in disability outcomes for veterans compared to nonveterans. The evidence for the veteran health paradox is new to the aging literature and reinforces the notion that veteran status is still a hidden variable with complex associations that may substantially alter results of population-level studies of health and disability processes. Acknowledgement of the nuanced disablement process of veterans is important for targeting prevention of chronic disease and disability, reduction of healthcare costs, and planning for the future of veteran-specific and population-level disability. This study is intended to make improvements in the overall health equity of U.S. veterans by informing researchers and policy-makers of their paradoxical disablement process and the importance of early stages of disablement to their later-life disability outcomes. Of note, the results highlight the need to tailor the chronic condition and disability management of older adults to their unique early-life experiences and the potential for early intervention to mitigate the onset of disability in later life. Further research is needed to deepen our understanding of the unique disablement process of veterans compared to nonveterans. Mechanisms stemming from specific service-related experiences—combat, environmental hazards, duration of service (career veterans vs. non-career veterans)—should be explored when possible. Differential onset of disability and differential health care access and utilization of veterans compared to nonveterans should also be explored as potential mechanisms for the observed veteran health paradox. All future research should strive for the use of nationally representative, longitudinal samples that include a marker for veteran status, and should use prospective veteran cohorts to document how younger veteran cohorts experience disablement and forecast how healthcare should adapt to their changing needs.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Health & Retirement Study, Veterans

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

**NOTE (Advisory Committee):**Miles G. Taylor, Professor Directing Dissertation; Thomas E. Joiner, University Representative; Jill B. Quadagno, Committee Member; Dawn C. Carr, Committee Member; Michael J. McFarland, Committee Member.

**SUBJECT:**Aging

**SUBJECT:**Public health

**DEGREE:**Doctoral

## Record number: 175

**FILENAME:**Uttermark\_fsu\_0071E\_15314.pdf

**TITLE:**The Determinants of Vote Choice in Ballot Measure Elections

**AUTHOR:**Uttermark, Matthew Joseph

**MEMBER (professor directing dissertation):**Weissert, Carol S.

**MEMBER (university representative):**Herrington, Carolyn D.

**MEMBER (committee member):**Barrilleaux, Charles

**MEMBER (committee member):**Pietryka, Matthew T.

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College Ofsocial Sciences and Public Policy

**CORPORATE NAME:**Department of Political Science

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

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

**ABSTRACT:**This dissertation consists of three essays examining the role of direct democracy in the American states. The papers broadly examine how actors in the direct democracy process decide to support ballot measures. Paper one is a panel experiment, conducted on the 2016 CCES. It explores what information matters to voters and when it matters in evaluating ballot measures. Paper two is an analysis of how newspapers cover ballot measures and how coverage influences voters. Paper three is an analysis of ballot measures and decentralization – exploring when and how decentralization influences citizen ballot measure support. Below I include brief abstracts of each. When and what types of informational cues do voters rely on when forming opinions? Previous tests on the influence of cues have used static, single time-frame designs and highlight the strength of partisan cues. In essay one, I make two contributions to that literature. It examines both partisan cues and policy information and does so over time. Using a panel experiment, I find that partisan cues trump policy cues when both are equally recent. However, policy information is capable of trumping party cues when policy information is more recent. These findings provide evidence that static experimental designs fail to capture the nuances of opinion formation that emerge from a more dynamic approach and that the type of cue leads to different effects at different times. Newspapers play a critical role in democracy–providing one of the few substantive and trustworthy sources of information for voters. Previous research has found that newspaper coverage of partisan elections is biased in the direction of the editorial board’s endorsement. I extend this research to ballot measures. Newspapers may engage in selection bias, dedicating more space to discussing one side of a ballot measure than alternative voting options, or presentation bias, presenting one side of a ballot measure campaign more favorably than alternative voting options. In essay two, I answer these questions: First, is newspaper coverage biased in ballot endorsement elections? Second, what types of bias do papers engage in? Finally, does the bias of newspaper coverage in ballot elections affect the outcome of ballot measure elections? I collect a sample of 36 initiative elections across five media markets to evaluate coverage. Using this data, I perform a content analysis examining how newspapers cover ballot initiative elections. I find that newspaper engage in both selection and presentation bias. Additionally, while the tone of coverage is not directly associated with support for initiative measures, positive press coverage does decrease the relative impact of a newspaper’s editorial endorsement. For decades, scholars of American and comparative federalism have found evidence of centralizing behavior in political institutions. The study of devolution has been relegated to specific policies (e.g. welfare reform) or dismissed as rhetorical bluster. In essay three, I argue that scholars of centralization have overlooked a potential institution of devolution – state ballot measures. I analyze a novel dataset of ballot measures in the U.S. states coded to reflect devolutionary impact. I find evidence that citizen-proposed ballot measures are decentralizing in nature and that centralization – regardless of proposing actor – is negatively associated with probability of passage.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**June 14, 2019.

**NOTE (Keywords):**Ballot Measure, Decentralization, Direct Democracy, Federalism

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

**NOTE (Advisory Committee):**Carol S. Weissert, Professor Directing Dissertation; Carolyn D. Herrington, University Representative; Charles Barrilleaux, Committee Member; Matthew T. Pietryka, Committee Member.

**SUBJECT:**Political science

**DEGREE:**Doctoral

## Record number: 176

**FILENAME:**Valladares\_fsu\_0071E\_15174.pdf

**TITLE:**The Milner Legacy: The Empire and Appeasement Shaped Interwar Anglo-German Relations

**AUTHOR:**Valladares, David M. (David Miguel)

**MEMBER (professor directing dissertation):**Creswell, Michael, 1958-

**MEMBER (university representative):**Souva, Mark A.

**MEMBER (committee member):**Blaufarb, Rafe

**MEMBER (committee member):**Grant, Jonathan A., 1963-

**MEMBER (committee member):**Upchurch, Charles, 1969-

**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 (237 pages)

**ABSTRACT:**The “Cliveden Set” was a 1930s, upper class group of prominent individuals who were politically influential in Britain during the interwar period. The group’s members included notable politicians, journalist, and aristocrats such as Nancy Astor, Geoffrey Dawson, Philip Kerr, Edward Wood, and Robert Brand. The term “Cliveden Set,” meant as a pejorative term, was coined by journalist Claud Cockburn who wrote for the newspaper The Week. Cockburn linked Geoffrey Dawson and The Times to a network led by the Astors who had an “extraordinary position of concentrated political power” and had become “one of the most important supports of German influence.” Considered to be a scapegoat for Britain’s Appeasement Policy by many historians, the Cliveden Set utilized their influence to encourage a British foreign policy that supported Hitler’s rearmament and the annexation of Austria and Czechoslovakia. Their goal was to preserve British Imperial rule and promote the unification of the British dominions. Philip Kerr, Geoffrey Dawson, Robert Brand and Lionel Curtis had all been members of Milner’s Kindergarten in South Africa. Waldorf and Nancy Astor, who owned The Times and the Cliveden Estate, and others, sought to supplement formula for imperial unification that was demonstrated by Alfred Milner during South African reconstruction. By adopting this template of imperial preservation which was exercised by Milner’s Kindergarten, the Cliveden Set’s role in the developments that led to World War II became substantial..

**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):**Summer Semester 2019.

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

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

**NOTE (Advisory Committee):**Michael Creswell, Professor Directing Dissertation; Mark Souva, University Representative; Rafe Blaufarb, Committee Member; Jonathan Grant, Committee Member; Charles Upchurch, Committee Member.

**SUBJECT:**History

**DEGREE:**Doctoral

## Record number: 177

**FILENAME:**Vallega\_fsu\_0071E\_15362.pdf

**TITLE:**Effects of Obesity-Related Inflammation on Breast Cancer Progression

**AUTHOR:**Vallega, Karin Andrea

**MEMBER (professor co-directing dissertation):**Sang, Qing-Xiang

**MEMBER (professor co-directing dissertation):**Ren, Yi, (Biomedical Sciences Professor)

**MEMBER (university representative):**Fadool, Debra Ann

**MEMBER (committee member):**Stagg, Scott

**MEMBER (committee member):**Steinbock, Oliver

**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 (96 pages)

**ABSTRACT:**In the United States, breast cancer is the most commonly diagnosed cancer in women, except for skin cancers. The American Cancer Society estimates there will be 268,600 new cases in 2019 alone. It is also the second leading cause of cancer mortality in U.S. women, after lung cancer, with an estimated 41,760 deaths set to occur in 2019. However, worldwide, breast cancer is the most frequently diagnosed cancer in women and the leading cause of female cancer deaths. There are many disparities in breast cancer incidence and prognosis. Among the starkest of these disparities is the difference between African American and Caucasian American women. African American women present with higher rates of aggressive triple-negative subtype, earlier age at diagnosis, and have a 39% higher mortality rate than Caucasian American women. African American women also have higher rates of obesity than Caucasian American women. Obesity and inflammation are also very closely linked to breast cancer. Obesity causes chronic inflammation, and is a risk factor for post-menopausal breast cancer and worse prognosis. This work looks at several effects of obesity-related inflammation in the progression of breast cancer. Bioinformatics was used to explore the differential expression of resistin, a pro-inflammatory cytokine that has 4-fold higher expression in African American women. Due to the pro-inflammatory behavior, and role in adipose tissue, resistin may be a link between obesity, inflammation, and cancer. Resistin was differentially expressed in African American early-stage receptor negative subtypes. It was especially linked to estrogen receptor negative breast cancer subtype. Resistin expression was also higher in triple-negative subtype compared to luminal A subtype, which is hormone receptor positive. The high levels of resistin could contribute to African American breast cancer phenotype and high mortality rates. It may also serve as an early detection biomarker, since it is linked to early stages. Another effect of obesity that was analyzed in this work was the role of macrophages in breast cancer cell-adipocyte crosstalk. Obesity triggers increased infiltration of macrophages into adipose tissue. An innovative cell co-culture system was used to study the paracrine interactions between adipocytes, macrophages, and breast cancer cells, and how they can benefit tumor progression. Macrophage conditioned media intensified the effects of breast cancer cell-adipocyte crosstalk. In this crosstalk, adipocytes become cancer-associated, meaning they become delipidated and increase production of pro-inflammatory cytokines. Breast cancer cells then benefit from this increased inflammation and become more aggressive. Macrophage conditioned media in breast cancer cell and adipocyte co-culture increased tumor cell proliferation and migration compared to co-culture with nonconditioned media. Macrophage conditioned media also increased the expression of pro-inflammatory cytokines by adipocytes, even in the absence of breast cancer cells, although the expression levels were highest with all three cell components. Additionally, in co-culture of adipocytes and breast cancer cells with macrophage conditioned media, adipocytes showed signs of delipidation. Therefore, macrophages contribute to adipocyte inflammation and cancer-association, and help drive tumorigenesis.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Adipocytes, Breast cancer, Disparities, Inflammation, Macrophages, Resistin

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

**NOTE (Advisory Committee):**Qing-Xiang Sang, Professor Co-Directing Dissertation; Yi Ren, Professor Co-Directing Dissertation; Debra Fadool, University Representative; Scott Stagg, Committee Member; Oliver Steinbock, Committee Member.

**SUBJECT:**Cytology

**SUBJECT:**Biochemistry

**DEGREE:**Doctoral

## Record number: 178

**FILENAME:**VallerGorfien\_fsu\_0071E\_15122.pdf

**TITLE:**Preliminary Examination of the Psychometric Properties of the Pfeiffer Emotional Intelligence Scale: A Teacher-Report Form for Measuring Emotional Intelligence in Children and Adolescents

**AUTHOR:**Valler Gorfien, Emilee Carmen

**MEMBER (professor directing dissertation):**Pfeiffer, Steven I.

**MEMBER (university representative):**Rehm, Marsha Lynn

**MEMBER (committee member):**Dong, Shengli

**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 (244 pages)

**ABSTRACT:**Social-emotional learning has become a popular focus within the school setting, which is aimed at fostering the well-being of the “whole child.” These programs have encapsulated an array of different character strengths, skills, and aptitudes which nurture interpersonal relationships and promote effective social-behavioral competencies. One of the emerging areas of emphasis in social-emotional processes, is emotional intelligence (EI), a construct broadly referring to self- and other- emotional awareness that guides decision making and thinking. EI has predominated the adult literature but is only beginning to have a large focus within youth populations. Of those studies which exist in children and adolescents, EI has been associated with a number of strengths-based outcomes (e.g., increased life satisfaction, stronger peer relationships, decreased pathology and negative behaviors), and is considered a driving force for children’s future well-being and multi-dimensional functioning. Despite the emphasis on EI in both popular culture and scholarly pursuit, issues in conceptualization and measurement have prompted the need for an empirically sound and valid measure that can gauge youth’s level of EI. The present study proposes a novel way of evaluating EI in children, through a teacher-report form called the Pfeiffer EI Scale. This scale was constructed in an attempt to minimize concerns with existing instrumentation and provide a rating of children’s EI level that can be used in conjunction with SEL programming in schools. Items on the Pfeiffer EI Scale are based upon measurable and observable characteristics of EI, which span across ability-based, trait-based, and mixed models of EI. Previous analysis (through exploratory factor analysis) of this scale revealed strong internal reliability and an underlying three-factor solution of the scale, which measures Positive Expression of Emotions, Negative Expression of Emotions, and Understanding and Managing Emotions. This dissertation serves as a continuation of the preliminary psychometric analysis of the Pfeiffer EI Scale. To demonstrate factorial validity of the measure, confirmatory factor analysis was performed. A three-factor solution was verified from this analysis after re-specifying the model and comparing it against a uni-dimensional structure; however, fewer items were retained. With careful consideration to underlying theory and conceptualization of EI, a total of 15 items were dropped from the original 47-item scale due to low factor loading, high conceptual overlap with other items, and high modification index values. The remaining 32-item total scale and individual factors maintained excellent internal consistency reliability. In an attempt to establish convergent validity with existing measures, the Pfeiffer EI Scale was compared to existing student-completed EI instruments (Mayer-Salovey-Caruso Emotional Intelligence Test – Youth Version; Emotional-Quotient Inventory, Youth Version, and Schutte Self-Report Emotional Intelligence Scale). No statistically meaningful relationship was found between teacher-reported EI and ability-based EI. The total score of the Pfeiffer EI Scale and Understanding and Managing of Emotions factor was weakly related to the Stress Management domain and total score of mixed-model EI. Additionally, no relationship was found between teacher-reported EI and trait-based EI. No relationship was found between the teacher-reported EI and life satisfaction or affect, suggesting minimal concurrent validity. A mild positive relationship was found between grade point average and the Positive Expression of Emotions factor, Understanding and Managing of Emotions factor, and Total EI score. There was a negative, weak relationship between the Understanding and Managing of Emotions factor and disciplinary action, indicating that students with greater disciplinary offenses had decreased EI scores. Females performed stronger than males on most factors and the total Pfeiffer EI score. No differences were found across ethnic or racial groups on teacher-reported EI. Individuals with higher socio-economic status did receive higher scores on the Negative Expression of Emotions factor compared to those with lower socio-economic status. The only meaningful difference across ages was between 11- and 15-year-olds on the Positive Expression of Emotions factor, suggesting that EI did not differ much across age bands. Overall, despite having solid internal consistency reliability, the results provide minimal support for the convergent and concurrent validity of the Pfeiffer EI Scale. However, included within this dissertation are proposed rationale for factors impacting validity, including the “subjectivity” of the emotional experience, informant discrepancies commonly found between other-rater forms, and the over-extension of the concept of EI. Despite the contradictory findings to many hypotheses, this study provides a unique perspective on how EI may be measured within youth populations and inform clinical and assessment practices. Limitations of the current work and future directions of study are also discussed.

**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):**April 19, 2019.

**NOTE (Keywords):**Ability-based Emotional Intelligence, Assessment, Emotional Intelligence, Social-Emotional Learning, Teacher Report Form, Trait-Based Emotional Intelligence

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

**NOTE (Advisory Committee):**Steven I. Pfeiffer, Professor Directing Dissertation; Marsha Rehm, University Representative; Shengli Dong, Committee Member; Yanyun Yang, Committee Member.

**SUBJECT:**Counseling psychology

**SUBJECT:**Psychology

**DEGREE:**Doctoral

## Record number: 179

**FILENAME:**Vasquez\_fsu\_0071E\_15324.pdf

**TITLE:**Exploring the Growth of Charge Balanced Tetrelide Phases from Mg/Al Flux

**AUTHOR:**Vasquez, Guillermo

**MEMBER (professor directing dissertation):**Latturner, Susan

**MEMBER (university representative):**Siegrist, Theo

**MEMBER (committee member):**Albrecht-Schmitt, Thomas E.

**MEMBER (committee member):**Stiegman, Albert E., 1953-

**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 (139 pages)

**ABSTRACT:**Flux synthesis is a useful method for the exploration and development of new tetrelide Zintl phases. Reactions of heavy divalent metals (A = Ca, Sr, Ba, Eu, Yb) with tetrels (Tt = Si, Ge, Sn) in Mg/Al flux mixtures produce charge-balanced tetrelides with the general formula (A/Mg)2Tt; these compounds have hexagonal structures analogous to those of a large family of rare earth transition metal phosphides. Initial reactions of ytterbium, barium and silicon in Mg/Al melts produced three new phases: Ba2Yb0.9Mg11.1Si7, Ba5Yb2Mg17Si12, and Ba20Yb5Mg61Si43, isostructural to the ternary phosphides Zr2Fe12P7, Ho5Ni19P12, and Ho20Ni66P43 respectively. Later a fourth silicide (Ba6Yb1.84Mg18.16Si13, analogous to Zr6Ni20P13) was synthesized. All these phases exhibit Pauli paramagnetic behavior, indicative of divalent Yb2+ ions. From the density of states (DOS) calculations on Ba2Yb0.9Mg11.1Si7, Ba5Yb2Mg17Si12 and Ba6Yb1.84Mg18.16Si13, these compounds are expected to be poor metals/semimetallic. Due to the very complex nature of the Ba/Yb/Mg/Si system (there are four competing, structurally related compounds) quenching experiments and in situ neutron powder diffraction studies were carried out to determine the reaction parameters that favor certain products. Under slow cooling conditions, Ba5Yb2Mg17Si12 precipitates from the flux at 800 °C. A faster cooling rate of an identical reaction results in the formation of single crystals of Ba20Yb5Mg61Si43 in the flux at 640 °C. This indicates that the crystallization of products in this metal flux reaction does not involve precipitation and interconversion of different phases but instead depends on the rate of cooling across the supersaturated metastable zone in this system. The other two compounds (Ba2Yb0.9Mg11.1Si7 and Ba6Yb1.84Mg18.16Si13) were not seen in the in situ neutron diffraction experiments. These phases might form under rare and difficult to reproduce conditions (caused by temperature fluctuations that occur when opening the furnace door) that position the reaction at a specific point in the metastable zone. Further exploration of reactions of tetrels with divalent alkaline earth or rare earth metals in Mg/Al flux was carried out. All the (A/Mg)2Tt products are tetrelide analogs of hexagonal ternary phosphides (Zr2Fe12P7, Ho5Ni19P12, Zr6Ni20P13 or Ho20Ni66P43 structure types). The charge-balanced stoichiometries result in semimetallic behavior, and the complex structures and heavy element incorporation yield low thermal conductivity, confirmed by thermoelectric measurements on two representative compounds. Ba5Eu2.85Mg16.15Si12 and Ba5Yb2.26Mg16.74Si12 have room temperature thermal conductivities of 2 – 3 W/mK, and Seebeck coefficients of +160 uV/K and -75 uV/K respectively, with Ba5Eu2.85Mg16.15Si12 exhibiting magnetoresistance around 2 K. These materials are promising for thermoelectric applications at high temperatures. Incorporation of europium results in compounds exhibiting very weak magnetic transitions at low temperatures. Magnetic susceptibility measurements on Ba5Eu2.85Mg16.15Si12 and Eu4.64Yb2.32Mg18.04Si12 indicated that both phases show no ordering below 3 K and that their Eu ions are divalent.

**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):**Summer Semester 2019.

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

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

**NOTE (Advisory Committee):**Susan E. Latturner, Professor Directing Dissertation; Theo Siegrist, University Representative; Thomas E. Albrecht-Schmitt, Committee Member; Albert E. Stiegman, Committee Member.

**SUBJECT:**Chemistry, Inorganic

**DEGREE:**Doctoral

## Record number: 180

**FILENAME:**Villafana\_fsu\_0071E\_15455.pdf

**TITLE:**Backbending, Seniority and Pauli Blocking of Pairing Correlations at High Rotational Frequencies in Rapidly Rotating Nuclei: A Systematic Analysis of Er, Yb, Hf and W Isotopes and Nuclear Structure Studies of 179, 180W, 160, 161Gd and 155Sm

**AUTHOR:**Villafana, Kalisa A. (Kalisa Aneika)

**MEMBER (professor directing dissertation):**Riley, Mark A.

**MEMBER (university representative):**Plewa, Tomasz

**MEMBER (committee member):**Bonesteel, N. 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 (158 pages)

**ABSTRACT:**The goal of nuclear structure experiments is to understand how properties of nuclei evolve as a function of key observables such as proton and neutron numbers, deformation, angular momentum and excitation energy, to name a few. In order to investigate how the nuclear structure evolves with these parameters, γ-ray spectroscopy can be utilized, which requires efficient γ-ray detection systems. This thesis details γ-ray spectroscopy to investigate the nuclear structure in a series of rare-earth nuclei using state of the art γ-ray detector systems. In the first part of this thesis, high-spin states in 179, 180 W (Z=74) produced via fusion-evaporation reactions carried out at Florida State University’s John D. Fox Laboratory are discussed. The reaction used to produce excited states in these nuclei was a 14C beam on an enriched 170 Er target, and the 5n and 4n evaporation channels were studied to investigate 179, 180 W respectively. The emitted γ-rays were detected using three Compton-suppressed clover detectors and seven single element Compton-suppressed high-purity germanium detectors. In this experiment, 852 million γ-γ coincidences and 82 million γ-γ-γ coincidences at 75 MeV beam energy were collected. Additionally, at a beam energy of 68 MeV, 119 million γ-γ coincidences and 9.6million γ-γ-γ coincidences. The primary purpose of this experiment was to add to a systematic investigation of band crossing frequencies in heavy tungsten nuclei in order to observe the effect of quasiparticle seniority and high rotational frequencies on pairing correlations. Additionally, due in part to results obtained from the first part of this analysis, new systematic data in the A ≈ 160 − 180 region is also discussed, with an emphasis on the role that pair-blocking effects play during the rotation of the nucleus. This systematic investigation builds upon the classic findings of Garrett et al. [1] who investigated systematically the critical band crossing frequencies resulting from the rotational alignment of the first pair of i\_{13/2} neutrons (AB) in rare-earth nuclei. In that study, evidence was found for an odd-even neutron number dependence attributed to changes in the strength of neutron pairing correlations. The present work carries out a similar investigation at higher rotational frequencies for the second pair of aligning i\_{13/2} neutrons (BC), advancing the work started by Scott Miller, formerly of the Riley group [2]. Again, a systematic difference in band crossing frequencies is observed between odd-N and even-N Er, Yb, Hf, and W nuclei, but in the BC case, it is opposite to the AB neutron-number dependence. These results are discussed in terms of a reduction of neutron pairing correlations at high rotational frequencies and of the effects of Pauli blocking on the pairing field by higher-seniority configurations. Also playing a significant role are the changes in deformation with proton and neutron number, the changes of location of single-particle orbitals as a function of quadrupole deformation, and the position of the Fermi surface with regard to the various Ω (projection of total angular momentum I onto the symmetry axis) components of the neutron i\_{13/2} shell. The second part of this thesis discusses in detail the nuclear structure of 160 Gd and highlights some new band structures in 155 Sm and 161 Gd. Two reactions were carried out to produce a multitude of neutron-rich isotopes performed at the Argonne Tandem Linear Accelerator System (ATLAS) at Argonne National Laboratory (ANL). Firstly, a 160 Gd beam of energy at 1000 MeV was impinged on a 154Sm target and then in a second experiment on a 164 Dy target. The goal of the deep-inelastic collisions was to provide a mechanism to reach a number of neutron-rich isotopes, in particular those from the mid-shell region in rare-earth nuclei. Although many neutron-rich nuclei were produced, they were not populated strongly enough to see new results. However, a byproduct of the reactions was the strong Coulomb excitation of the 160 Gd beam. Many excited states in 160Gd were produced, and as a result, a spectroscopic analysis of 160Gd was carried out, and will be discussed in detail in this thesis. Additionally, new γ-ray transitions in other isotopes such as 155Sm and 161Gd were also produced and will be discussed. The Gammasphere detector array was used to detect γ-rays from the excited nuclei, because of its sensitivity to cleanly delineate the vast number of multi-nucleon transfer reaction channels. As a result of both analysis, many new decay transitions and new energy levels were observed in the aforementioned nuclei. Whenever possible, the intensities, angular correlations, spins, parities, and rotational behaviors of these newly discovered states were analyzed.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**gamma-radiation, nuclear, nuclear structure, spectroscopy

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

**NOTE (Advisory Committee):**Mark A. Riley, Professor Directing Dissertation; Tomasz A. Plewa, University Representative; Nicholas E. Bonesteel, Committee Member; Jorge Piekarewicz, Committee Member; Vandana Tripathi, Committee Member.

**SUBJECT:**Nuclear physics

**SUBJECT:**Physics

**DEGREE:**Doctoral

## Record number: 181

**FILENAME:**Vo\_fsu\_0071E\_15279.pdf

**TITLE:**Large-Scale Multi-Target Tracking Problem for Interacting Targets

**AUTHOR:**Vo, Garret Dan

**MEMBER (professor directing thesis):**Park, Chiwoo

**MEMBER (university representative):**Srivastava, Anuj, 1968-

**MEMBER (committee member):**Liang, Zhiyong (Richard)

**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 (108 pages)

**ABSTRACT:**The unique physical properties of nanoparticles depend on their sizes and shapes. Therefore, an ability to precisely control the size of nanoparticles and tune their morphology will allow scientists and engineers to modify their physical properties, which will lead to many potential applications. To precisely control nanoparticles' sizes and shapes requires a deep understanding of their growth mechanism. To understand their growth mechanism, a direct observation and its quantitative analysis are both necessary. In the direct observation study, the electron microscopy method has shown promises, because the \textit{in situ} method enables researchers to see the growth process using video recordings. In these video recordings, each frame displays an image from an electron microscope. However, this method yields a vast number of electron images; therefore, analyzing these images to monitor the nanoparticles' growth is a challenging task. The objective of this dissertation is to develop an automation process to capture the complex growth event of nanoparticles in a sequence of electron microscope images. The automation process consists of two tasks: detect nanoparticles in an electron microscope image that has a non-uniform background and significant noise; and then track these detected nanoparticles in a large number of video frames obtained from a single camera. In each frame, complex interaction among these nanoparticles exists; therefore, the tracking algorithm will capture the complex interaction among these nanoparticles. Two solutions are proposed in this dissertation. To detect nanoparticles, an electron microscope image is converted to a binary image through a process called image binarization. To perform the image binarization step, the background of the electron microscope image is first estimated with a robust regression technique; then, it is subtracted from the input image. Afterwards, a global thresholding algorithm is applied to the subtracted outcome in order to achieve the binary image. To track these detected nanoparticles in a large number of video frames, an online algorithm has been created. This algorithm leverages the multi-way data association, which is capable of tracking complex interaction among nanoparticles but suffers from computational inefficiency for a large number of video frames. The online algorithm forms fragmented trajectories between two consecutive frames (i.e. frame-by-frame data association). When missed-association between nanoparticles occur, the algorithm augments these missed-associated nanopartiles to nanoparticles in the second frame in the frame-by-frame data association step. Then, the algorithm continues forming trajectories with the multi-way data association for the incoming video frame. When these augmented nanoparticles are associated within the sliding window, the algorithm initiates the creation of tracks, which connect missed-associated nanoparticles at their respective time frames to their correspondents at the incoming video frame. While working on the second solution, we also created a computer simulation model to generate multi-target datasets with their respective ground-truth associations.The generated datasets and their respective ground-truth associations will serve as a benchmark data to test and evaluate multi-target tracking algorithms. The simulation model serves two purposes: cover all complexity of multi-target tracking scenarios, which public datasets lack; and provide the ground-truth target tracking and association so that the evaluation of multi-target tracking algorithms can be performed without any manual video annotation process.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**computer vision, electron microscope image, multi-target tracking, nanoparticles, object detection

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

**NOTE (Advisory Committee):**Chiwoo Park, Professor Directing Thesis; Anuj Srivastava, University Representative; Richard Liang, Committee Member; O. Arda Vanli, Committee Member.

**SUBJECT:**Industrial engineering

**SUBJECT:**Computer science

**SUBJECT:**Artificial intelligence

**DEGREE:**Doctoral

## Record number: 182

**FILENAME:**Walker\_fsu\_0071N\_15339.pdf

**TITLE:**A Historical and Archaeological Investigation of the Nineteenth Century Occupations at the San Luis De Talimali Mission Site (8Le4), Leon County, Florida

**AUTHOR:**Walker, Charles C. (Charles Cameron)

**MEMBER (professor directing thesis):**Marrinan, Rochelle A.

**MEMBER (committee member):**Peres, Tanya M.

**MEMBER (committee member):**Joos, Vincent Nicolas

**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 (188 pages)

**ABSTRACT:**The goal for this thesis is to present a historical, and archaeological assessment of the nineteenth century occupations at the Mission San Luis de Talimali (8Le04) site. San Luis is a multicomponent site that has seen Native American, Spanish, and nineteenth and twentieth century occupations. While there has been a limited amount of research on the nineteenth century at San Luis, I looked to synthesis past research and present my own contributions toward understanding this period of time at San Luis. Historic research on this topic was previously undertaken by Elizabeth Monroe (1984), which was heavily consulted and cited as I pursued my own historic research. Before addressing what the archaeological record can demonstrate, I presented all the known information of the nineteenth century at San Luis from the documentary record. Attention was also placed on the information acquired through the 1936 WPA interview of Louis Napoleon, who was enslaved on San Luis prior to emancipation. This historic research was pursued to assist in the interpretation of the subsurface surveys undertaken at San Luis. The nineteenth century material culture from two subsurface surveys were analyzed, and presented as distribution maps to understand the artifact-patterning representative of this period in San Luis’ history. Dr. Gary Shapiro’s 1984 auger survey, and his subsequent report 1987 report, was presented along with the posthole survey undertaken in 2018 by Dr. Tanya Peres. I look to present data that helps clarify some of the uncertainties surrounding the nineteenth century at San Luis. This thesis was undertaken to understand the potential location of the San Luis plantation main house, the presence of nineteenth century road on San Luis’ landscape, the location of nineteenth century structures, and if there can be any determination of areas where there was slave activity. What is known from the documentary record, and the interview of Napoleon, was used alongside the distribution of nineteenth century material culture from the subsurface testing at San Luis to answer these questions. However, this thesis was also conducted to highlight the need to consider all components of an archaeological site, and to give voice to those whose history was not recorded in the documentary record,

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Florida Plantations, Historical Archaeology, Leon County, Mission San Luis, Plantation Archaeology, Tallahassee

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

**NOTE (Advisory Committee):**Rochelle A. Marrinan, Professor Directing Thesis; Tanya M. Peres, Committee Member; Vincent N. Joos, Committee Member.

**SUBJECT:**Archaeology

**SUBJECT:**History

**DEGREE:**Masters

## Record number: 183

**FILENAME:**Wang\_fsu\_0071E\_15292.pdf

**TITLE:**Photoresponse and Charge Transport in Halide Perovskites

**AUTHOR:**Wang, Xi

**MEMBER (professor directing dissertation):**Gao, Hanwei

**MEMBER (university representative):**Hellstrom, Eric

**MEMBER (committee member):**Bonesteel, N. E.

**MEMBER (committee member):**Piekarewicz, Jorge

**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 (106 pages)

**ABSTRACT:**Halide Perovskites have recently risen as a new class of optoelectronic materials. Remarkable optical and electrical properties have led to the demonstration of various perovskite-based devices such as solar cells1, LEDs2-5, photodetectors6 and lasers7,8. Particularly, perovskite solar cells have reached >24% of the energy conversion efficiency and outperformed most of the single-junction thin film solar cells available on the market1. Unfortunately, most of the perovskite-based devices remained more-or-less unstable due to a series of unusual behaviors such as current-voltage hysteresis9 and photo-induced phase segregation10,11. Studies about the underlying mechanisms are in demand. In this dissertation, I focused on studying the charge transport and photoresponse of halide perovskites to reveal the mechanisms related to material stability, particularly under electrical and optical stimuli. The changes of halide perovskite materials in a device under electrical operation were studied by using a microscopic tool, scanning photocurrent microscopy. The results showed the dynamic nature of the doping concentration in the hybrid perovskite CH3NH3PbI3, as a function of the external biasing voltages. Further studies on the synthesis methods showed such a dynamic process could be attributed to electric field-assisted ion migration mainly through defect sites. The partial suppression of ion migration was observed in materials processed at higher temperature. Except the electric-field triggered instability of the internal potential distribution, while under illumination, a different type of stability, the phase stability in mixed-halide perovskites attracted a lot of attention. Phase separation in mixed-halide perovskites under illumination was a tough problem, which directly related to the degradation of desired device performance. In this dissertation, the correlation between the phase stability and morphology was discovered. A model based on thermodynamics was developed to explain such a correlation. Based on the thermodynamic model, the composite materials CsPbX3/Cs4PbX6 with guest-host structures were created with the phase separation problem successfully solved. Furthermore, the composites are sustainably functionalized even under extreme conditions, i.e., under extremely intense illumination, making the composited useful for devices required to work in extreme conditions. The optical and electrical properties of CsPbX3/Cs4PbX6 composites were further investigated for the application of such composites to functional devices. Surprisingly, the presence of the photoluminescence inactive Cs4PbBr6 can significantly enhance the light emitting efficiency of CsPbBr3 in the composites. The unique negative thermal quenching observed near the liquid nitrogen temperature indicates that a type of shallow states generated at the CsPbBr3/Cs4PbBr6 interfaces is responsible for the enhancement of photoluminescence. Finally, light emitting diodes based on CsPbBr3/Cs4PbBr6 composites are demonstrated. Both quantum efficiency and emission brightness are improved significantly compared with similar devices constructed using pure CsPbBr3. The unfavorable charge transport property of host matrix Cs4PbBr6 could be circumvented by optimizing the ratio between the host and the guest components and the total thickness of the composite thin films. The inorganic composition of the emitting layer also leads to improved device stability under the condition of continuous operation. The studies in this dissertation indicated great potentials of composite materials with optimized designed properties. Depends on the application purposes, more matrix materials with the combination of halide perovskites need to be explored. The future plan will more directed to the investigations of fundamental photophysics and charge transport in a large collection of compositing combinations.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**June 7, 2019.

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

**NOTE (Advisory Committee):**Hanwei Gao, Professor Directing Dissertation; Eric Hellstrom, University Representative; Nick Bonesteel, Committee Member; Jorge Piekarewicz, Committee Member; Peng Xiong, Committee Member.

**SUBJECT:**Physics

**DEGREE:**Doctoral

## Record number: 184

**FILENAME:**Weatherspoon\_fsu\_0071E\_15093.pdf

**TITLE:**The Relationships among Social Comparison Orientation and Adjustment to Type 2 Diabetes in Adults

**AUTHOR:**Weatherspoon, Marilyn A.

**MEMBER (professor co-directing dissertation):**Dong, Shengli

**MEMBER (professor co-directing dissertation):**Ebener, Deborah J.

**MEMBER (university representative):**Lewis, Sandra

**MEMBER (committee member):**Phillips, Beth M.

**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 (157 pages)

**ABSTRACT:**As people continue to live longer, there are more opportunities to acquire a chronic illness or disability in their lifetime. The onset and diagnosis of illnesses such as Type 2 Diabetes (T2D) has such a subtle and insidious onset that individuals may go undiagnosed. Over 30 million adults in the United States have been diagnosed with a form of diabetes. With the increasing numbers of people experiencing chronic illness, understanding how the person navigates the process of adjustment will be of high importance to rehabilitation professionals. By applying the social comparison theory and the theory of adjustment to disability, the present study aimed to answer three research questions: 1) What are the relationships among perceived health status, self-esteem, social comparison orientation and adjustment to T2D?, 2) What are the impacts of perceived health status, self-esteem, social comparison orientation on the adjustment to T2D above and beyond the factors of age and gender?, and 3) To what extent does self-esteem, perceived health status, social comparison orientation scores (including upward and downward social comparison scores) predict adjustment to disability based on age? A sample of 136 adults with type 2 diabetes throughout the state of Florida responded to the online survey. A hierarchical regression analysis was conducted to analyze the data. In the age group of 21 to 34-year old participants, upward social comparison orientation was a significant predictor of adjustment to disability. For ages 51 to 65, the significant predictors of adjustment to disability were self-esteem score and downward social comparison orientation score. These findings present rehabilitation professionals with a means of understanding and exploring the individual differences in the factors related to adjustment to disability.

**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):**April 18, 2019.

**NOTE (Keywords):**Adjustment to disability, Perceived Health Status, Self-Esteem, Social Comparison Orientation, Type 2 Diabetes

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

**NOTE (Advisory Committee):**ShengLi Dong, Professor Co-Directing Dissertation; Deborah J. Ebener, Professor Co-Directing Dissertation; Sandra Lewis, University Representative; Beth M. Phillips, Committee Member.

**SUBJECT:**Educational psychology

**DEGREE:**Doctoral

## Record number: 185

**FILENAME:**Wei\_fsu\_0071E\_15276.pdf

**TITLE:**Same Standards, Different Classes: Comparative Case Study on the Issue of Social Class in Public School Art Education

**AUTHOR:**Wei, Yi-Wen

**MEMBER (professor directing dissertation):**Broome, Jeffrey L. (Jeffrey Lynn)

**MEMBER (university representative):**Khurshid, Ayesha

**MEMBER (committee member):**Villeneuve, Pat, 1955-

**MEMBER (committee member):**Shields, Sara Scott

**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 (253 pages)

**ABSTRACT:**The purpose of this study was to explore the issue of social class in art education. As mentioned in my theoretical framework underlying this study, Bourdieu (1973/2000) used the term cultural capital as forms of knowledge, tastes, and practices to explain the relationship between knowledge and power in the field of education. I employed Bourdieu’s concepts of cultural capital to further develop my argument on the relationship between social class and visual arts education. By using qualitative comparative case study methods, I examined the similarities and differences in the implementation of visual art education between two selected third-grade classes with distinct aggregations of student socioeconomic status, yet taught by the same itinerant art teacher in the same county¬. I scrutinized and compared the two cases with respect to their overall access to art education resources, including funding, materials, and allotment of time for instruction; the art-related knowledge, values, and skills taught and emphasized in each art classroom; the similarities and differences between the two cases in terms of how art instruction was implemented and the art teacher’s reasons for differentiating or not differentiating art instruction. This study was conducted in a metropolitan area in Virginia. I used purposeful sampling to select my participant—one itinerant visual art teacher, who traveled between and worked at a Title 1 elementary school and another elementary school within a relatively affluent area with a much lower rate of students eligible for the National School Lunch Program (NSLP). The difference in the percentages of students enrolling in the NSLP between these two schools is up to 73%. The fieldwork took place from October 2017 until March 2018. Through fieldwork, I collected data through observation, interviews, and relevant document collection. I then organized and analyzed the collected data during April 2018 to November 2018 and began to write the findings in December 2018. My data analysis strategies included writing initial codes and memos, generating patterns and themes, and selecting cross-cases themes and topics. The cross-case comparison identified the following findings: (1) the economic and racial/ethnic differences between the two school communities; (2) the disparities in external educational resources; (3) the differences in students’ learning foundations and inspirations; (4) the emphasis on formalist aesthetics and craftsmanship in art instruction aligning with Virginia’s Visual Art Standards; (5) the different in students’ learning outcomes in art; and (6) the different cultures of learning between the two classes. Holding postmodern perspectives as my philosophical framework for this study, I value the local contexts in which I conducted this study and encourage readers to construct their own judgment and interpretation. Expanding upon my findings, I provided the implications of my study for visual arts coordinators and administrators, art education practitioners, and art teacher training programs in higher education. To further investigate the issue of social class in art education, I also recommended a multitude of relevant issues with methodologies to be used in future research.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Art Education, Comparative Case Study, Educational Equity, Social Class, Socioeconomic Status

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

**NOTE (Advisory Committee):**Jeffrey Broome, Professor Directing Dissertation; Ayesha Khurshid, University Representative; Patricia Villeneuve, Committee Member; Sara Scott Shields, Committee Member.

**SUBJECT:**Art--Study and teaching

**SUBJECT:**Education, elementary

**SUBJECT:**Teachers--Training of

**DEGREE:**Doctoral

## Record number: 186

**FILENAME:**Wick\_fsu\_0071N\_15435.pdf

**TITLE:**Self-Photo Editing and Its Effect on Eating Disorder Risk in College Students

**AUTHOR:**Wick, Madeline Renée

**MEMBER (professor directing thesis):**Keel, Pamela K., 1970-

**MEMBER (committee member):**Joiner, Thomas, Jr.

**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 (61 pages)

**ABSTRACT:**Social media has been implicated as a correlate and a cause of increased disordered eating in men and women. Yet, little is known about how specific aspects of social media impact eating disorder pathology. Through utilization of a two-stage study, including a large correlational design and an experimental design, the present study sought to determine how posting photos of the self that have been edited (self-photo editing) on Instagram relates to disordered eating in male and female college students. In the first stage, the association between disordered eating and self-photo editing was examined in a large sample of undergraduates. Participants for the second stage were regular self-photo editors who were randomly assigned to either edit or not edit a photo of themselves and post or not post that photo on Instagram. Assessments of momentary levels of eating disorder risk factors and urges to engage in exercise and dietary restraint were taken before and after the experimental manipulation and at 24-hour follow-up. A repeated-measures ANOVA was used to assess editing, posting, and their interaction as predictors of changes in eating disorder risk factors and features across time points. While those who self-photo edit have higher levels of disordered eating than those who do not, anxiety symptoms were similarly increased in self-photo editors. Experimental results showed no causal associations between self-photo editing and disordered eating, but did demonstrate causal associations between posting and anxiety. Results suggest that anxiety symptoms, rather than disordered eating, are significantly impacted by posting photos of the self, whether or not photos are edited. Examining the impact of social media use may represent an important avenue for future anxiety research.

**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):**Summer Semester 2019.

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

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

**NOTE (Advisory Committee):**Pamela K. Keel, Professor Directing Thesis; Thomas E. Joiner, Committee Member; Chris Schatschneider, Committee Member.

**SUBJECT:**Clinical psychology

**DEGREE:**Masters

## Record number: 187

**FILENAME:**Willingham\_fsu\_0071E\_15254.pdf

**TITLE:**The Role of Ideographs in Nonprofit Branding: Abortion as Ideograph and Its Role in the 2012 Susan G. Komen/Planned Parenthood Social Media Crisis

**AUTHOR:**Willingham, Christine Marie

**MEMBER (professor directing dissertation):**Houck, Davis W.

**MEMBER (committee member):**McDowell, Stephen D., 1958-

**MEMBER (committee member):**Rayburn, J. D. (Jay D.), II

**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 (389 pages)

**ABSTRACT:**This dissertation traces the discursive and political history of abortion and concludes “abortion” is an ideograph, a term coined by Michael Calvin McGee to describe an ultimate term or slogan representing an ideology and acts as a motivating force in political discourse. Next, this dissertation examines the role of abortion as ideograph during the Susan G. Komen/Planned Parenthood social media crisis in 2012 and its impact on brand image. The crisis threatened Komen's reputation; thus, exemplifying the characteristics of a paracrisis (Coombs & Holladay, 2012) and revealed dissonance between brand identity and brand image. Prior to the crisis, candidates running for office had pledged to eliminate funding for Planned Parenthood and emphasized its role as the nation's "largest abortion provider." To shift the narrative from abortion provider to health care provider, Planned Parenthood leveraged the attention generated by the crisis to enhance its brand image. The following artifacts were selected for analysis: media reports, legislation and court cases about abortion, comments posted during the crisis to Komen’s Facebook page, blog posts, and press releases of advocacy groups and congressional leaders. A rhetorical analysis of the texts revealed rhetors viewed Komen’s action as a political decision in response to conflicting ideological beliefs about abortion. Komen’s longstanding partnership with Planned Parenthood and the use of “pro-choice” language in its brand communication facilitated a brand image of Komen as supporting the right of a woman to make choices relevant to her personal circumstances. The news that Komen would be “halting grants to Planned Parenthood” prompted Komen’s publics to reevaluate their understanding of the organization’s brand values. Pro-life supporters understood Komen's decision as an acknowledgment of the harmful effects of abortion to women while pro-choice supporters viewed the decision as a betrayal of its brand values. The crisis demonstrates the power of ideographs to motivate and unite like-minded publics; however, the ideograph can also pose a threat to brand credibility by dividing organizational publics along ideological lines. Komen’s failure to understand its brand image as supportive of women’s right to choice led to organizational action viewed as contrary to brand values and resulted in the loss of brand equity.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**abortion, brand image, ideograph, Komen, paracrisis, Planned Parenthood

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

**NOTE (Advisory Committee):**Davis W. Houck, Professor Directing Dissertation; Susan S. Fiorito, University Representative; Stephen McDowell, Committee Member; Jay Rayburn, Committee Member.

**SUBJECT:**Communication

**SUBJECT:**Rhetoric

**SUBJECT:**Women's studies

**DEGREE:**Doctoral

## Record number: 188

**FILENAME:**Wirks\_fsu\_0071N\_15305.pdf

**TITLE:**Impacts of Sugar Cane Agricultural Fires on Air Quality in Southern Florida: Modeling Particulate Matter with the Hysplit Atmospheric Dispersion Model

**AUTHOR:**Wirks, Charles K.

**MEMBER (professor directing thesis):**Holmes, Christopher D.

**MEMBER (committee member):**Fuelberg, Henry E.

**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 (84 pages)

**ABSTRACT:**The state of Florida annually approves 7.4×105 hectares (1.8×106 acres) of prescribed fires, and the production of particulate matter (PM) may cause health issues for neighboring communities. Incomplete combustion of biomass leads to the production of abundant amounts of concentrated PM. PM smaller than 2.5 microns in diameter (PM2.5), may have adverse effects on respiratory and cardiovascular health, as shown in earlier studies. Excessive exposure to PM2.5 may lead to diseases such as respiratory distress, asthma, heart disease, cancer, and death. In this study, the distribution and effects of PM2.5 caused by prescribed burns of sugarcane crops during the harvest season are simulated and evaluated. This research uses archived data of prescribed fires records from 2008-2015 from the FFS open burn authorizations (OBA). The fires occur during the sugarcane harvest season from Fall (October) until Winter (typically March). We simulate the concentrations of PM2.5 from these fires using the HYSPLIT atmospheric dispersion model driven by meteorology from the North American Mesoscale (NAM) weather model. The results are evaluated against the wind, precipitation, humidity observations, emission factors, locations of fires as reported by Florida Forestry Services (FFS) and observed concentration values reported by the Environmental Protection Agency (EPA). Errors occurred due to the uncertainties and variability in emission factors, fire location, and fire size. The simulation results were then used to evaluate mortality caused by PM2.5 from sugarcane fires in Florida.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**May 23, 2019.

**NOTE (Keywords):**aerosols, air quality, atmospheric, dispersion, fires, model

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

**NOTE (Advisory Committee):**Christopher D. Holmes, Professor Directing Thesis; Henry Fuelberg, Committee Member; Jeff Chagnon, Committee Member.

**SUBJECT:**Meteorology

**DEGREE:**Masters

## Record number: 189

**FILENAME:**Wofford\_fsu\_0071E\_15335.pdf

**TITLE:**Language Input Intervention Using Visual Feedback: Impact on Adult Words Delivered to at-Risk Bilingual Children

**AUTHOR:**Wofford, Mary Claire

**MEMBER (professor directing dissertation):**Wood, Carla, (Speech-Language Pathology Professor)

**MEMBER (university representative):**McDowell, Stephen D., 1958-

**MEMBER (committee member):**Cripe, Juliann J. Woods, 1952-

**MEMBER (committee member):**Tibi, Sana

**MEMBER (committee member):**Zuilkowski, Stephanie Simmons

**CORPORATE NAME:**Florida State University

**CORPORATE NAME:**College of Communication and Information

**CORPORATE NAME:**School of Communication Science and Disorders

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

**PHYSICAL DESCRIPTION:**1 online resource (112 pages)

**ABSTRACT:**Dual language learners who come from low-income backgrounds are at-risk for experiencing a word gap in the amount of language they hear before kindergarten entry compared to peers of middle- and high-income backgrounds (Fernald, Marchman, & Weisleder, 2013; Hart & Risley, 1995). Spanish-English dual language learners are more likely to be in family-based childcare in their early childhood (National Center for Education Statistics, 2017), meaning they rely more heavily on caregiver language during important periods of neurodevelopment. This study aimed to intervene with caregivers of young children from Spanish-English-speaking low-income families. The intervention used a language input feedback device called Starling by Versame and its corresponding application on an iPad to provide caregiver word counts alongside visual displays of language input across the day. In a multiple-baseline design, three cohorts of participating families accessed the Starling device and application and tracked their daily adult word counts with visual displays. Day-long LENA recordings were collected throughout the baseline and intervention phases in order to select 15-minute segments of interaction selected from high-priority contexts characterized by increased caregiver-child interactivity. By observing the adult word count across the 15-minute segments, the results of this study observed a limited effect of the Starling intervention on quantity of language input across a hierarchy of contexts. Visual analysis of data characterized its limited effect across participant families based on changes in level, trends, and overlapping data across phases, among other features of visual data. Hierarchical linear modeling further revealed statistically the limited effect of the Starling on caregiver word counts in distinct contexts across all participating families. Participants completed an exit questionnaire regarding the social validity of the technology-based intervention and rated the intervention as socially and culturally valid. This study contributed novel evidence pertaining to the use of a quantity-focused language input feedback intervention and the social validity of a technology-based intervention with families of Spanish-English speaking backgrounds living in low-income conditions.

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

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

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

**NOTE (Keywords):**Bilingual language development, Caregiver-Implemented Intervention, Child language, Language Input

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

**NOTE (Advisory Committee):**Carla Wood, Professor Directing Dissertation; Stephen McDowell, University Representative; Juliann J. Woods, Committee Member; Sana Tibi, Committee Member; Stephanie Zuilkowski, Committee Member.

**SUBJECT:**Language and languages

**SUBJECT:**Early childhood education

**DEGREE:**Doctoral

## Record number: 190

**FILENAME:**Wolford\_fsu\_0071E\_15188.pdf

**TITLE:**The Emotion Regulation Process in Parents: Responding to the Call for Emotion Regulation Skills in Parenting Interventions

**AUTHOR:**Wolford, Sarah N. (Sarah Nancy)

**MEMBER (professor directing dissertation):**McWey, Lenore M.

**MEMBER (university representative):**Radey, Melissa

**MEMBER (committee member):**Cui, Ming, 1971-

**MEMBER (committee member):**Rehm, Marsha Lynn

**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 (172 pages)

**ABSTRACT:**Approximately 20% of children in the United States meet criteria for an emotional or behavioral disorder, including internalizing symptoms such as anxiety and depression, and externalizing symptoms such as conduct and oppositional defiance disorders (Ogundele, 2018). Evidence-based parenting interventions are one avenue of treatment designed to reduce symptoms of child emotional and behavioral disorders by promoting positive parenting practices that reduce risk for negative child outcomes. Additional research in the last decade of parenting interventions has also shown that parent psychosocial health (e.g., self-esteem, self-efficacy, anxiety) improved as a result of parent participation in these interventions. These positive, yet unexpected parent outcomes have generated a new body of research focused on the processes (i.e., internal emotions, beliefs) through which these positive changes to parent mental health occurred. Further, parenting intervention researchers have also begun to test core elements of the intervention in order to determine whether behavior-based skills or emotion-focused skills led to these positive parent outcomes. What remains unclear, however, is how these changes occurred. Researchers propose that emotion regulation (ER) skills (e.g., awareness of reactivity; capacity to manage internal distress) may be associated with positive changes to symptoms of parent mental health challenges. However, most parenting programs do not include ER content. Shifting parenting programs to include ER content has the potential to improve parent mental health and reduce symptoms of child emotional and behavioral problems. Only one previous qualitative study (Holtrop, Parra-Cardona & Forgatch, 2014) has examined parent’s process of change via shifts in behavior-focused parenting skills after an intervention. Additional research is needed to determine parents’ perceptions of an intervention promoting ER skills and the unique role of emotions in reducing mental health symptoms and improving child outcomes. The purpose of this study, therefore, was to assess parent’s perceptions on the utility of ER skills, as well as illuminate the skill-building process of implementing an ER task in order to derive implications for ER content inclusion in parenting interventions. Project aims were accomplished through the following research questions: (1) How do parents describe their own emotion regulation process? and, (2) How do parents perceive and process the ER implementation task? The term “process” in the context of this study includes close examination of parent in-depth experiences, perceptions, and actions taken to implement the ER task. Qualitative data were collected from 17 parents (8 fathers and 9 mothers) with 100% of participants completing the pre and post-implementation interviews (34 total interviews). Data were analyzed using grounded theory analysis via open, axial and selective coding to generate empirical evidence for parents use of ER skills. Findings illustrated that parents navigated through three phases amid describing their existing understanding of ER, and developed greater awareness of self and their child as they applied the ER implementation task. These experiences were grouped into three main phases, across pre-implementation and post-implementation contexts: (1) A Priori Knowledge of ER, (2) “It’s Definitely Not Common Practice”: The ER Learning Process, and (3) “Stop and Think”: Developing Awareness and Insight. Across these phases, parents emphasized the importance of ER skills in their own lives, and the meaningful progress made to improve parent-child interactions. Additionally, parents emphasized the cognitive effort in which they engaged in order to attempt regulation (e.g., focused attention, self-monitoring). Results of this study provide additional insight into the utility of ER skills in parenting interventions, and encourage researchers to consider ER skills as a potential mechanism of change.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Emotion Regulation, Parenting, Parenting Interventions, Qualitative Methodology

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

**NOTE (Advisory Committee):**Lenore M. McWey, Professor Directing Dissertation; Melissa Radey, University Representative; Ming Cui, Committee Member; Marsha Rehm, Committee Member.

**SUBJECT:**Medical sciences

**DEGREE:**Doctoral

## Record number: 191

**FILENAME:**Xie\_fsu\_0071E\_15185.pdf

**TITLE:**Improved Mvdc Breaker Operation by Existing Power Converters in Shipboard Applications

**AUTHOR:**Xie, Ren

**MEMBER (professor directing dissertation):**Li, Hui, 1970-

**MEMBER (university representative):**Zhang, Jinfeng, (Statistics Professor)

**MEMBER (committee member):**Peng, Fang

**MEMBER (committee member):**Zheng, Jianping

**MEMBER (committee member):**Steurer, Michael

**CORPORATE NAME:**Florida State University

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

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

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

**PHYSICAL DESCRIPTION:**1 online resource (81 pages)

**ABSTRACT:**The medium voltage dc (MVDC) power system is gaining increasing attention in applications such as renewable energy and shipboard power systems due to its advantages in reliability, efficiency, power quality and power density. However, the short-circuit fault management in a MVDC system is a key issue because of the lack of natural zero-crossing point and conventional mechanical circuit breaker (CB) design challenge. So solid state CBs (SSCB) or hybrid CBs (HCB) are under development to enable the breaker-based fault protection approach. Another breaker-less approach utilizing the inherent current-limiting capability of power semiconductor devices is also promising in a MVDC system. The state-of-the-art of the two fault management approaches are reviewed. This thesis is focused on developing a technology originated from the breaker-less method to improve the performance of breaker-based fault protection approach. In the shipboard breaker-based MVDC system, converters are normally shut down to react to the fault. The diodes freewheeling phenomenon is a concern but a quantitative analysis is still not available. Moreover, the potential of converter during fault has not been exploited completely. Considering large number of converters already existing in the shipboard MVDC system, the overall benefits at no extra hardware cost may be significant. Therefore, a converter fault ride through (FRT) strategy aiming at improving CB operation is proposed in this thesis. The proposed research found that there are some converters located in parallel with activated CBs during the fault and thus, active fault current sharing (FCS) by these converters are possible. In addition, this peak fault current reduction effect on CBs can be amplified from the systematic perspective because multiple CBs in various fault scenarios can be benefited from a single converter. As a first step, the short-circuit fault scenarios of a shipboard breaker-based MVDC system are analyzed comprehensively and fault equivalent circuits including power converters adjacent to CBs are developed. The equivalent circuits are analyzed mathematically and the reaction of passive mode converters to the fault are discussed, which can be a benchmark to evaluate the proposed active FCS strategy. Next, the proposed converter FCS strategy to reduce the CB fault current is illustrated in detail, together with the device stress analysis. Finally, the experimental verifications on a down-scaled test setup are provided.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**medium voltage dc, short circuit fault protection

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

**NOTE (Advisory Committee):**Hui Li, Professor Directing Dissertation; Mei Zhang, University Representative; Fang Peng, Committee Member; Jianping Jim Zheng, Committee Member; Michael Steurer, Committee Member.

**SUBJECT:**Electrical engineering

**DEGREE:**Doctoral

## Record number: 192

**FILENAME:**Yan\_fsu\_0071E\_15321.pdf

**TITLE:**An Absolute Angular Momentum Based Analytical Model for Tropical Cyclone Radial Wind Profiles

**AUTHOR:**Yan, Ruikai

**MEMBER (professor directing dissertation):**Cai, Ming, 1957-

**MEMBER (university representative):**Niu, Xufeng, 1954-

**MEMBER (committee member):**Chagnon, Jeffrey M.

**MEMBER (committee member):**Speer, Kevin G. (Kevin George)

**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 (206 pages)

**ABSTRACT:**The ability to construct radial wind profiles of tropical cyclones (TC) from limited observations is crucial to the initialization of TC simulations and predictions. A minimum requirement for constructing a reasonable radial wind profile is a high skill in estimating one of the four TC characteristic parameters, namely maximum wind speed (Vmax), radius of maximum wind speed (rmax), 17 ms−1 wind speed (V17), and radius of 17 ms−1 wind (r17) from the other three. In this study, we put froth an absolute angular momentum (AAM) based analytical model for inferring the radial profile beyond the rmax from observations of these four parameters. An observed AAM loss L is defined as the ratio of the observed AAM at r17 to that at rmax. We parameterize the observed AAM loss L as an analytical function of these four parameters and environmental factors. The combination of analytical expressions of the AAM loss L and the AAM at r17 and rmax, gives us the analytical model. This observation-physics model allows us to construct radial profiles of TCs under four different configurations from observations of these four parameters. Specifically, we can use Vmax and rmax as inputs for solving (a) the tangential velocity profile of a TC from rmax to r17 or (b) the TC’s radius for a given tangential velocity from Vmax to V17. Alternatively, we can use V17 and r17 as inputs for solving (c) the tangential velocity profile of a TC from r17 to rmax or (d) the TC’s radius for a given tangential velocity from V17 to Vmax. This enables us to acquire radial wind profiles when one of the four parameters is not available in observations. The degree of consistency of (a) versus (c) and (b) versus (d) is an indicator of the robustness of the model. We evaluate the skill of our model using 4491 records of 197 named TCs derived from the Extended Best Track Dataset for the period of 1998-2016, and find that the mean errors in estimating Vmax, rmax, V17, and r17 are, respectively, 5.95 m/s, 25.37 km, 3.33 m/s, and 57.67 km. The proposed model has several advantages over widely recognized existing TC wind profile models. Most empirical models, for example, are designed to construct radial wind profiles in only one of the four configurations. While other physics-based models have mean errors in Vmax, rmax, and r17 that are larger by several factors. Furthermore, our model can yield physically realistic radial wind profiles and solutions of TC characteristic parameters (meaning that for radial wind profiles, wind velocity decreases monotonically from rmax to r17, and for solutions, Vmax > V17 > 0 and r17 > rmax > 0) for all 4491 TC records, regardless of which of the four configurations is chosen. For more than 10% of the TC records, however, other physics-based models have radial wind profiles that are discrete or increases from the inside to outside, and have solutions that either do not exist or are not physical under certain configurations.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Analytical Model, Angular Momentum, Hurricane, Tropical Cyclone, Wind

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

**NOTE (Advisory Committee):**Ming Cai, Professor Directing Dissertation; Xufeng Niu, University Representative; Jeﬀery Chagnon, Committee Member; Kevin Speer, Committee Member; Guosheng Liu, Committee Member.

**SUBJECT:**Atmospheric sciences

**SUBJECT:**Meteorology

**DEGREE:**Doctoral

## Record number: 193

**FILENAME:**Yarbrough\_fsu\_0071E\_15340.pdf

**TITLE:**Using Telepractice to Coach Caregivers of Children with Visual Impairments to Increase the Independent Living Skills of Their Children

**AUTHOR:**Yarbrough, Susan Elizabeth

**MEMBER (professor directing dissertation):**Lewis, Sandra

**MEMBER (university representative):**Cripe, Juliann J. Woods, 1952-

**MEMBER (committee member):**Hanline, Mary Frances

**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 (217 pages)

**ABSTRACT:**Children with visual impairments have unique learning needs because visual impairment impacts a child’s ability to learn incidentally though observation (Lowenfeld, 1952, 1973). Literature suggests children with visual impairments do not perform independent living skills at the same level as their peers with typical vision (e.g., Lewis & Iselin, 2002). Teachers of students with visual impairments (TVIs) struggle to find time to teach independent living skills during the school day (e.g., Lohmeier, Blankenship, & Hatlen, 2009), but caregivers may have the time and motivation to prioritize these skills at home. Caregiver coaching has been shown to increase the skills of caregivers of children with disabilities (e.g., Marturana & Woods, 2012); however, coaching models have not yet been widely applied to caregivers of children with visual impairments. Some researchers have applied teleconferencing technologies to provide access to coaching and successfully build the capacity of caregivers of children with disabilities (e.g., Baharav & Reiser, 2010). As such, telepractice coaching was explored as a tool to bridge physical distance between coaches with expertise in educating children with visual impairments and caregivers who have the opportunity to implement instruction in independent living skills for their children with visual impairments. A single case, multiple baseline across contexts design was used to implement a telepractice caregiver coaching intervention in the homes of three caregiver-child dyads for two to three times a week over about 10 weeks. The included children were tactual learners with no other significant disabilities aged 5 to 11 years old. The study sought to answer the questions: (a) does telepractice coaching with the Family Guided Routines Based Intervention (FGRBI) coaching model (e.g., Woods, 2017) increase caregiver correct use of coached instructional strategies during independent living skills routines with their children who have visual impairments? and (b) does caregiver use of coached instructional strategies increase the child’s independent completion of independent living skills tasks? Because the coaching intervention was only implemented across all three contexts in one dyad, data from that dyad only can be considered as evidence of the effectiveness of the intervention. In that dyad, the caregiver increased her skills above baseline levels in all three contexts and demonstrated mastery in two contexts. However, great variability in the data make it difficult to conclude with certainty that there is a functional relation between telepractice caregiver coaching and caregiver instructional strategy use in teaching her child with a visual impairment. In addition, instructional skills learned in one skill context were generalized by some caregivers to other independent living skills contexts without coaching. Challenges with the length and duration of sessions caused concern regarding the social validity of the intervention. However, data collected after the study from participants and an external rater as well as maintenance data suggested high social validity of the intervention. Findings suggest the use of telepractice to deliver interactive caregiver coaching should be further investigated to determine its effectiveness to increase both caregiver instructional skills and the independent living skills of children with visual impairments. If telepractice is found to be effective, TVIs may benefit from using telepractice coaching to build relationships and strengthen capacity within the families of their students. Further research is necessary to examine the use of the telepractice coaching intervention to meet the needs of families and children with diverse characteristics, explore the role of siblings as peer models, and expand the role of the child in coaching. Further, the composition of the telepractice coaching intervention should be investigated to determine which intervention components may be most effective for which families, and how frequently they should be delivered for maximum efficiency.

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**June 28, 2019.

**NOTE (Keywords):**caregiver education, coaching, expanded core curriculum, independent living skills, telepractice, visual impairments

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

**NOTE (Advisory Committee):**Sandra Lewis, Professor Directing Dissertation; Juliann Woods, University Representative; Amy Guerette, Committee Member; Mary Frances Hanline, Committee Member.

**SUBJECT:**Special education

**DEGREE:**Doctoral

## Record number: 194

**FILENAME:**Yunesi\_fsu\_0071E\_15396.pdf

**TITLE:**Beyond the Standard Model of Particles: Effective Field Theories and Baryogenesis

**AUTHOR:**Yunesi, Arash

**MEMBER (university representative):**Agashe, Amod S. (Amod Sadanand)

**MEMBER (committee member):**Reina, Laura

**MEMBER (committee member):**Huffenberger, Kevin M., 1977-

**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 (118 pages)

**ABSTRACT:**Two big questions in physics beyond the Standard Model of particles are nature of Dark Matter and a theory of Quantum Gravity. In this work, topics related to both of these improtant questions are presented. First, we introduce an effective theory for soft and collinear limits of gravitational scatterings. It is a well-known fact that amplitudes including gravitons are inherently difficult to calculate. Our effective theory in its target phase space, substantially simplifies calculations of scattering amplitudes including gravtions. Our step by step procedure gives all the relevant operators at leading and next to leading powers for any full theory that couples to gravitons. In addition, the soft graviton theorem and decoupling of collinear gravitons at the leading power are manifest from the outset in the effective symmetries of the theory. At the next-to-leading power, certain simple structures of amplitudes, which are completely obscure in Feynman diagrams of the full theory, are also revealed. We will also discuss how ambiguity in choice of light-cone coordinates introduces fundamental redundancies in Soft Collinear Effective Theory (SCET). SCET Lagrangian should be invariant under these transformations of coordinates, and the constraints from these transformations further reduce calculations needed for a scattering process. Second, thermal freeze-out of WIMPs can provide a unified origin of dark matter and baryon abundances in our universe. We show that this mechanism exhibits rich collider phenomenology. The collider signatures we point out can be tested at the current and future experiments at the LHC, even if the WIMPs are not charged under Standard Model and higgs interactions. In particular, the simplest such implementation can already offer a very clean signal of a TeV-scale resonance that decays to diphotons with a cross section that can easily be within the reach of the current and near-future LHC runs in the region of parameter space that leads to a successful baryogenesis. Other characteristic signatures include the production of multi-bottom and/or multi-top quarks, promptly or displaced. An even more exotic possibility is the production of two separate sets of isolated emerging jets connected by a charged track, which may require new dedicated studies. Finally, di-nucleon decay can also provide a powerful probe of the mechanism.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**Baryogenesis, Beyond Standard Model, Effective Field Theory, Gravity

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

**NOTE (Advisory Committee):**Takemichi Okui, Professor Directing Dissertation; Amod Agashe, University Representative; Laura Reina, Committee Member; Kevin Huﬀenberger, Committee Member; Andrew Askew, Committee Member.

**SUBJECT:**Physics

**DEGREE:**Doctoral

## Record number: 195

**FILENAME:**Zhang\_fsu\_0071E\_15053.pdf

**TITLE:**Scale-Up Sample Fabrication and Preliminary Transport Mechanism Study of Carbon Nanotube Based Electrical Conductor

**AUTHOR:**Zhang, Songlin

**MEMBER (professor directing dissertation):**Liang, Zhiyong (Richard)

**MEMBER (university representative):**Andrei, Petru

**MEMBER (committee member):**Zeng, Changchun (Chad)

**MEMBER (committee member):**Dickens, Tarik

**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 (149 pages)

**ABSTRACT:**Conductive materials are indispensable for almost all aspects of life. However, conventional metal conductors have some drawbacks including heavy weight and corrosion issues. Carbon nanotubes (CNTs) are promising as an alternative conductor that offers multiple advantages and functionalities including low density, corrosion resistance, and high specific mechanical/electrical/thermal properties. Much work has been done to improve the electrical conductivity of CNT assemblies, transferring the excellent properties of CNTs demonstrate at the nanoscale to practical applications such as fiber and films remains a challenge. This research focuses on studying the improvement of electrical/mechanical performance of CNT fibers/films. . Chapter 1 gives an introduction of CNT conductors. A comprehensive literature review of CNT conductor development is presented in Chapter 2. Chapters 3, 4 and 5 discuss three projects focuses on synergistic effects, interface design and scalable fabrication, respectively. Conclusions are given in Chapter 6. We attempted to improve the electrical conductivity of CNT films based on synergistic effects though alignment and chemical doping. We fabricated large-scale continuous CNT sheets with ultra-high and stable electrical conductivity, which reached a conductivity in the range of 104 S/cm. We also investigated the interface structural optimization between CNTs and carbon matrix to simultaneously enhance strength and conductivity. To achieve this, a unique interface enhancer, pyrolyzed polydopamine (py-PDA), was added between the CNTs and carbon matrix, which resulted in better load transfer and electron transport. The as-prepared CNT/py-PDA/C composite fibers demonstrated remarkable improvements in electrical conductivity (2.1 × 103 S/cm) and tensile strength (up to 727 MPa), which should prove to be advantageous comparing to previously reported CNT/C composites. We also studied and developed a roll-to-roll production capability to fabricate continuous nanotube sheets or buckypaper with relatively high and stable conductivity. The electrical conductivity of the resultant continuous buckypaper can be improved to 7.6 × 104 S/m by using an oxidant chemical (i.e. HNO3 and I2) doping method. Those results are valuable for seeking lightweight and flexible non-metal conductors for potential engineering applications.

**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 9, 2019.

**NOTE (Keywords):**carbon/carbon composites, Carbon nanotube, composite interface, electrical conductors, electron transport

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

**NOTE (Advisory Committee):**Zhiyong (Richard) Liang, Professor Directing Dissertation; Petru Andrei, University Representative; Chad Zeng, Committee Member; Jin Gyu Park, Committee Member; Tarik Dickens, Committee Member.

**SUBJECT:**Engineering

**DEGREE:**Doctoral

## Record number: 196

**FILENAME:**Zhang\_fsu\_0071E\_15173.pdf

**TITLE:**Urban Growth, Landscape Changes, and Coastal Vulnerability: A Giscience Approach

**AUTHOR:**Zhang, Fang

**MEMBER (professor directing dissertation):**Yang, Xiaojun, 1965-

**MEMBER (university representative):**Ye, Ming

**MEMBER (committee member):**Uejio, Christopher K.

**MEMBER (committee member):**Folch, David C.

**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 (108 pages)

**ABSTRACT:**Urban growth causes environmental changes on a global scale. Coastal regions which undergo fast landscape transitions and population growth are facing higher risks from ecological degradation and severe natural hazards. However, the impacts of urban growth on species’ richness and people’s vulnerability to hazards are quite complex and diverse. The development of efficient coastal plans requires much deeper understanding of urban growth and its socioecological consequences. This dissertation proposes a GIScience based approach integrating remote sensing, geographic information system (GIS) and landscape ecology to evaluate urban growth and its impact in coastal landscapes. My dissertation consists of three major parts: analyzing the spatiotemporal characteristics of landscape changes caused by urban growth; examining the impact of urban growth on habitat fragmentation and biodiversity; and characterizing the heterogeneity of coastal vulnerability and analyze the relationship with urban growth. My dissertation research aims to develop a better understanding of the interactions between the urban growth and the surrounding natural systems. The variable selection method used in coastal urban mapping can be applied to other spectrally heterogeneous areas. The assessment of urban spatiotemporal structure and coastal vulnerability can provide critical insights in the ecological and social inequality so that can be instructional for coastal planning and natural resource management.

**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):**April 12, 2019.

**NOTE (Keywords):**Bayesian model, Coastal urbanization, landscape metrics, Random Forests, variable selection, vulnerability

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

**NOTE (Advisory Committee):**Xiaojun Yang, Professor Directing Dissertation; Ming Ye, University Representative; Christopher K. Uejio, Committee Member; David C. Folch, Committee Member.

**SUBJECT:**Geography

**DEGREE:**Doctoral

## Record number: 197

**FILENAME:**Zhang\_fsu\_0071E\_15308.pdf

**TITLE:**Do We Measure Human Capital Resources Right? : A Meta-Analysis of Human Capital Resources Measures

**AUTHOR:**Zhang, Liwen

**MEMBER (professor directing dissertation):**Van Iddekinge, Chad H.

**MEMBER (university representative):**Scott, Maura L.

**MEMBER (committee member):**Ferris, Gerald R.

**MEMBER (committee member):**Wang, Gang, (Professor of Genomics)

**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 (110 pages)

**ABSTRACT:**Human capital resources (HCR) are thought to be one of the most important resources for organizations. Although HCR have been the focus of considerable research, relatively little attention has been devoted to the nature of HCR or the extent to which extant measures capture the construct. For example, some HCR measures used in prior research capture only part of the construct, and other measures appear to capture other constructs altogether. The overarching goal of the present dissertation is to better understand the nature, measurement, and effects of HCR. To do so, I use theory and prior research to delineate the different elements of HCR, as well as how HCR differ from potential antecedents of HCR. I then use meta-analysis to test three main issues: 1) whether HCR are distinct from the potential antecedents of HCR, including education, work experience, and high performance work practices (HPWPs); 2) whether HCR comprise distinct elements and how those elements relate to collective performance; 3) whether HCR have a stronger relation with collective performance than its antecedents. I also examine several variables that may moderate relations between HCR and collective performance, such as the level of analysis (e.g., unit- vs. firm-level performance). A meta-analysis of 214 independent samples (N = 60,094) suggested that HPWPs, and to a lesser extent, collective education, are antecedents of HCR (ρ = .48 and .17, respectively). In contrast, collective work experience is largely unrelated to HCR (ρ = .06). Second, HCR have a positive relation with collective outcomes. Corrected correlations between HCR and outcomes range from .16 for motivation-based HCR to .36 for knowledge- and skills-based HCR. Third, overall HCR is more strongly related to collective performance (ρ = .22) than education (ρ = .01) and work experience (ρ = .14). Overall, these findings suggest that HCR are not the same as some antecedents of HCR, and that using those antecedents to capture HCR underestimates relations between this key resource and collective outcomes. Furthermore, HCR are multidimensional and some dimensions (e.g., knowledge and skills) appear to be more strongly related to collective performance than other dimensions (e.g., personality and motivation).

**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):**Summer Semester 2019.

**NOTE (Date of Defense):**June 24, 2019.

**NOTE (Keywords):**Education, Firm performance, High performance work practices, Human capital resources, Work experience

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

**NOTE (Advisory Committee):**Chad H. Van Iddekinge, Professor Directing Dissertation; Maura Scott, University Representative; Gerald R. Ferris, Committee Member; Robert E. Ployhart, Committee Member; Gang Wang, Committee Member.

**SUBJECT:**Management

**DEGREE:**Doctoral

## Record number: 198

**FILENAME:**Zhang\_fsu\_0071E\_15402.pdf

**TITLE:**Surface Characterization of Nanoparticles Using Nuclear Magnetic Resonance

**AUTHOR:**Zhang, Chengqi

**MEMBER (professor directing dissertation):**Mattoussi, Hedi

**MEMBER (university representative):**Fadool, Debra Ann

**MEMBER (committee member):**Hu, Yan-yan

**MEMBER (committee member):**Kennemur, Justin Glenn

**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:**Nanocrystals such as semiconducting quantum dots and gold nanoparticles have attracted a lot of attentions due to their unique size- and shape- dependent optical properties. They have been used in various of biological applications such as sensing, imaging and drug delivery. In chapter 1, we provided a brief introduction about the optical properties of nanoparticles and why they are attractive. We also discuss several studies reported to prepare nanoparticle dispersions in aqueous media. In Chapter 2, we presented a routine about how we studied the stoichiometry of the organic ligand shell on hydrophobic CdSe-ZnS QDs. Combining a few advanced solution phase NMR spectroscopy techniques, we were able to monitor the purification process and study the affinity of surface ligands. Other measurements were used to complement the results obtained from NMR spectroscopy, namely matrix assisted laser desorption ionization (MALDI) and FTIR. In Chapter 3, we extended this work to hydrophilic CdSe-ZnS core-shell quantum dots and Au nanoparticles where is more widely used in biological application. We chose three lipoic acid based polyethylene glycol (PEG)-modified ligands with different number of PEG chains or different number of anchoring group to study the effect of surface ligand architecture to the surface coverage. Free ligands in the buffer media and bound ligands on the nanoparticle surface were distinguished using diffusion ordered spectroscopy. Quantitative study was conducted to determine the ligand density. Factors that affect the surface coverage were discussed. In Chapter 4, we explored another important feature of nanoparticles - hydrodynamic size, a characteristic dimension that reflects the Brownian motion of objects, such as proteins, macromolecules and nanoparticles when dispersed (or homogeneously suspended) in any fluid phase. Both Dynamic light scattering (DLS) and ordered spectroscopy (DOSY) were used to extract the size information. The results were compared size by size. The similarity and differences of two techniques were discussed in details. In Chapter 5, we summarized the idea and contributions assembled in this dissertation followed by a discussion of the future outlook.

**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):**Summer Semester 2019.

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

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

**NOTE (Advisory Committee):**Hedi Mattoussi, Professor Directing Dissertation; Debi Fadool, University Representative; Yan-yan Hu, Committee Member; Justin Kennemur, Committee Member.

**SUBJECT:**Chemistry

**DEGREE:**Doctoral

## Record number: 199

**FILENAME:**Zhou\_fsu\_0071E\_15295.pdf

**TITLE:**Synthetic Control of Excited-State Dynamics in Low Dimensional Metal Halide Hybrids

**AUTHOR:**Zhou, Chenkun

**MEMBER (professor directing dissertation):**Ma, Biwu, 1980-

**MEMBER (university representative):**Zhu, Lei, 1978-

**MEMBER (committee member):**Siegrist, Theo

**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 (108 pages)

**ABSTRACT:**Organic metal halide hybrids have recently emerged as a highly promising class of functional materials for a variety of optoelectronic applications. The exceptional structural tunability has been demonstrated for this class of materials with different types of crystallographic structures. Using appropriate organic moieties and metal halide salts, organic metal halide hybrids with three- (3D), two- (2D), one- (1D), and zero-dimensional (0D) structures at the molecular level have been developed and studied. Despite the remarkable progress realized in the 3D and 2D metal halide structures, 1D and 0D structures with unique properties were left significantly underexplored. Lowering the dimensionality to 0D with the individual polyhedral metal halides separated from each other allows the bulk crystals to exhibit intrinsic properties (e.g. efficient Stokes-shifted broadband emissions) of their building blocks, which is significantly different from their counterparts with higher dimensionalities. We have demonstrated the capability to synthetically control the photophysical properties of this class of 0D hybrids by different strategies, such as tuning of their compositions, metal halide geometries, and molecular environments. The excitement about the recent developments lies not only in the specific achievements but also in what these materials represent in terms of a new paradigm in materials design. The application of low dimensional hybrids as single-component phosphor in optically pumped white LEDs will also be discussed.

**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):**Summer Semester 2019.

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

**NOTE (Keywords):**low dimensionality, metal halide hybrids, photoluminescence

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

**NOTE (Advisory Committee):**Biwu Ma, Professor Directing Dissertation; Lei Zhu, University Representative; Theo Siegrist, Committee Member; Jingjiao Guan, Committee Member.

**SUBJECT:**Chemical engineering

**DEGREE:**Doctoral