ROBERT C. GREEN II, PH.D.

Curriculum Vita

EDUCATION

Doctor of Philosophy in Engineering August 2012
University of Toledo, Toledo, OH
Title of Dissertation: "Novel Computational Methods for the Reliability Evaluation of Composite Power Systems using Computational Intelligence and High Performance Computing Techniques."

Master of Science in Computer Science May 2007
Bowling Green State University, Bowling Green, OH
Title of Project: "Solving Linear Programs with Interval Coefficients Using GACS."

Bachelor of Science in Computer Science May 2005
Bachelor of Science in Applied Mathematics
Geneva College, Beaver Falls, PA

ACADEMIC POSITIONS

2019 – Present	Associate Professor of Computer Science, Bowling Green State University
2013 – 2019	Assistant Professor of Computer Science, Bowling Green State University
2014 – Present	Prestige Faculty, Dept. of Elec. Eng. & Comp. Sci., University of Toledo
2013 – 2014	Adjunct Faculty, Dept. of Elec. Eng. & Comp. Sci., University of Toledo
2012 – 2013	Research Assistant Professor, Dept. of EECS, University of Toledo
2009 – 2012	TA/RA, Dept. of EECS, University of Toledo
2005 – 2007	TA, Department of ASOR, Bowling Green State University

NON-ACADEMIC POSITIONS

2020/07 – Present	CIO/CTO Kidneys in Common and Alliance for Paired Kidney Donation
2012/08 – Present	Owner & Software Engineer, All Code, LLC, Bowling Green, OH
2011/05 – 2016/08	Director of Wind and Solar Research, Wind Energy Corporation, Toledo, OH
2005/01 – 2012/08	Freelance Developer, Bowling Green, OH
2007/10 – 2009/08	Senior Interactive Developer, Hart Associates Inc., Maumee, OH
2007/07 – 2007/10	Data Warehouse Engineer I, HCR Manorcare, Toledo, OH
2007/02 – 2007/07	Programmer/Developer, Maritz Research, Maumee, OH
2006/05 – 2006/08	Web Development Intern, HCR Manorcare, Toledo, OH
2004/02 – 2005/08	Sr. Software Engineer, Thar Technologies Inc., Pittsburgh, PA

TEACHING EXPERIENCE

A) Undergraduate Courses:

- CS 3060: Programming Languages
- CS 3140: Web Application Development
- CS 3540: Introduction to Software Engineering
- CS 3800: Programming Languages
- CS 4900: Independent Project
- HNRS 4980: Honors Project Development
- HNRS 4990: Honors Project
- OR 3800: Introduction to Management Science

B) Undergraduate-Graduate Courses (and number of sections):

- CS 4170/5170: Introduction to Parallel Programming
- CS 4200/5200: Artificial Intelligence
- CS 4290/5290: Data Communications and Networks
- CS 4400/5400: Optimization Techniques
- CS 4540/5540: Software Development Project

C) Graduate Only Courses Taught:

- CS 5010: Fundamentals of Programming
- CS 5850: Independent Readings
- CS 5890: Internship
- CS 6010: Data Science Programming
- CS 6800: Availability and Reliability of Cloud Computing
- MBA 6010: Quantitative Analysis for Managers

D) Thesis & Dissertation Committee and Graduate Project Advisor Services

Student's Name	**Year**	**University**
Chair of Thesis Committee		
John Bartocci	In Progress	BGSU
Nolan Gormley	In Progress	BGSU
Morgan Mastrocinque	In Progress	BGSU
Blade Frisch	SU 2020	BGSU
Justin Kleinknecht	SU 2020	BGSU
Asanga Ramanayake	SU 2020	BGSU
Jeremy Storer	SU 2016	BGSU
Matthew Bick	SP 2015	UT
Srimanth Gadde	FA 2013	UT
Brett Snyder	FA 2013	UT
Member of Thesis Committee		
Che Shian Hung	SU 2019	BGSU
Dewan Chaulagin	SP 2019	BGSU
Haonan Zhang	SP 2019	UT
Mohd Arafat	SU 2018	BGSU
Christian Promper	SU 2017	FHS/BGSU
Shubhendra Shrimal	SU 2016	BGSU
Jahnavi Yalamanchilli	SP 2016	UT
Saba Jamaliannasrabadi	SP 2015	BGSU
Joris Lueckenga	SU 2015	FHS/BGSU
Hussein Al-Olimat	SP 2014	UT
Nuwan Kumarasiri	SP 2014	UT
Wolfgang Laussenhammer	SU 2014	FHS/BGSU
Mahalakshmi Lakshminaraynan	FA 2013	UT
Member of Dissertation Committee		
Tyler Woods	SP 2020	BGSU
Khalid Al-Asmari	SP 2020	UT
Eduardo Da Silva Schneider	SP 2019	BGSU
Ahmad Javaid	SU 2015	UT
Mona Nasseri	SU 2015	UT
Graduate Project Advisor		
Binish Koirola	SU 2020	BGSU
Avisha Lad	SU 2020	BGSU

Nathan Light	SP 2019	BGSU
Aakanksha Mahajan	SP 2019	BGSU
Aditya Pokuri	SP 2019	BGSU
Rajha Al–Ghamdi	FA 2018	BGSU
Supraja Lankireddy	FA 2018	BGSU
Abhinay Patthi	FA 2018	BGSU
Manal Zakri	FA 2018	BGSU
Sasank Daggabuti	SU 2018	BGSU
Le Yang	SU 2018	BGSU
Sagar Sharma	SP 2018	BGSU
Sara Yarshenas	SP 2018	BGSU
Rahul Gupta	SP 2017	BGSU
Ramin Khakzad	SP 2017	BGSU
Goutham Kunduru	SU 2017	BGSU
Pranith Pola	SP 2017	BGSU
Nick Rodgers	SP 2017	BGSU
Seyedhamid Shekaforoush	SP 2017	BGSU
Sujitha Uppalapati	SP 2017	BGSU
Rithish Danasekaran	SU 2016	BGSU
Thomas Charest	SP 2016	BGSU
Siddarth Ravikumar	SP 2016	BGSU
Mounika Markala	SP 2016	UT
Vishaka Agrawal	FA 2015	BGSU
Deepanshu Kher	FA 2015	UT
Gwendolyn Wahl	FA 2015	BGSU
Purvi Agrawal	SU 2015	BGSU
Shruthi Rajoli	SU 2015	BGSU
Congyingzi Zhang	SP 2015	BGSU
Scott Arnold	FA 2014	BGSU
Rachel Householder	FA 2014	BGSU
Aswin Mathew	SP 2014	BGSU
Amrutha Mutyala	SP 2014	UT
Wesley Vollmar	SP 2014	BGSU
Anutha Mutyala	SP 2013	UT

Graduate Project Co-Advisor

Tianyi Zhang	SU 2016	BGSU

CURRICULUM DEVELOPMENT

SU 2020 **Undergraduate Course Modification. CS 3540 Introduction to Software Engineering.** Developed curriculum for online offering.

SU 2020 **Graduate Course Modification. CS 7300 Unsupervised Feature Learning.** Developed curriculum for online offering.

SU 2020 **Graduate Course Modification. CS 7200 Machine Learning.** Developed curriculum for online offering.

SP 2020 **Graduate Program Modifications. Graduate Certificate in Software Engineering.** Proposed change in curriculum to replace CS 5540: Software Engineering Project with CS 6310: Secure Software Engineering.

SP 2020	**Graduate Course Modifications. Various.** Changed prefix of multiple courses ot SE (Software Engineering) to match Software Engineering Certificate and Specialization.
SP 2020	**Graduate Course Modifications. CS 6010 Data Science Programming.** Developed curriculum for online offering.
FA 2019	**Graduate Program Modifications. Opened MS in Data Science.** Opened program to direct admissions.
FA 2019	**New Graduate Course. CS 5020 Fundamentals of Computer Science.** Developed new, remedial course to fill gaps in background for Computer Science & Data Science students. Course is approved for distance learning.
FA 2019	**Graduate Course Modification. CS 5010 Fundamentals of Programming.** Modified course to add distance learning.
FA 2019	**New Undergraduate Courses. CS/SE 4770 Computer Science/Software Engineering Project.** Aided in the development of this new capstone course across the undergraduate curriculum in CS.
FA 2018 – SP 2019	**Graduate Program Modifications. Graduate Certificate in Software Engineering.** Developed, planned, and monitored the progress of this new, online program focused on professional students.
SP 2018	**Graduate Program Modifications. Specialization in Digital Forensics and Cybersecurity.** Developed, proposed, and gained approval for this new specialization that carves out a focused niche for the department curriculum.
SP 2018	**Graduate Program Modifications. MS Project Presentation Changes.** In conjunction with the Graduate Committee, proposed and changed the format of MS Project presentations from individual 20 minute presentations to a poster session presentation involving short presentations and assessment.
FA 2017	**New Graduate Course. CS 6270 Advanced High Performance Computing.** Created this new course that covers co-processor based high performance computing as part of the electives for the new MS and Ph.D. in Data Science programs.
FA 2017	**New Graduate Course. CS 6010 Data Science Programming.** Created this new course that covers the use of fundamental programming tools for Data Science. The course will be used for both the computer science program and for the new MS and Ph.D. in Data Science programs.
FA 2017	**Graduate Course Modifications. Added a standard course outcome to CS 4000/5000 level stacked courses.** Added the outcome "I can analyze relevant research and communicate my findings" as a standard differentiator between 4000 and 5000 level stacked courses. This ensures research goals are being met at 5000 level.

FA 2017	**Undergraduate Course Modifications. CS 3140 Web Application Development.** Included the use of Node.js for server-side scripting and development (replaced PHP).
FA 2017 – SP 2018	**Graduate Program Modifications. Re-designing Graduate Program Learning Outcomes.** Worked with the Graduate Committee and Graduate College to adjust these items for proper assessment and evaluation.
SP 2017	**Graduate Program Modifications. CS 5010 Programming Fundamentals.** In conjunction with the Graduate Committee, developed a remedial course aimed at giving all graduate students an even playing field with regards to programming skills. The course is required of all students, may be waived based on skill level, and does not count towards the MS Degree.
FA 2017	**Graduate Program Modifications. CS 5050 Research Methods in Computer Science**. Added CS 5050 back into the core curriculum of the MS CS program in order to ensure the research and writing skills of our graduate students.
SP/FA 2016	**Graduate Program Modifications. CS 6990 Requirements.** In conjunction with the Graduate Committee, proposed a program change allowing students to take more thesis credit hours (a total of 9 possible) when completing their thesis in order to improve quality of student research.
FA 2016	**Undergraduate Course Modifications. CS 3140 Web Application Development.** Selected a new book and developed accompanying lab materials, classroom exercises, and lectures.
FA 2016	**Course Modifications. CS 4540/5540 Software Development Project.** Selected a new textbook, developed accompanying lectures, quizzes, etc., and moved to a new professional software development platform (Gitlab).
FA 2016	**Graduate Program Modifications. MS Specialization in Software Engineering.** Completed all paperwork and submitted in conjunction with the Graduate committee and those involved in development of the BS in Software Engineering Major.
SP 2016	**Graduate Course Modifications. CS 5550 Software Architecture and Design.** Cross-listed course with undergraduate variant.
SP 2016	**Graduate Course Modifications. CS 5560 Software Testing and Quality Assurance.** Cross-listed course with undergraduate variant.
SP 2016	**Graduate Program Modifications. MS in Computer Science.** Deactivated specializations in Operations Research and Telecommunications. Renamed CS 6640 to Advanced Software Engineering.
FA 2015	**Graduate Course Modifications. CS 5120 Analysis of Algorithms.** Updated pre-requisite so that all MS students are able to take course based on admittance.

SP 2015	**Core Program Modifications. CS 3900/3901 Internship in Computer Science.** Along with J.K. Lee, created course to accommodate students performing part-time internships.
SP 2015	**Core Program Modifications. CS 6500 Big Data Analytics.** Created Computer Science course to accommodate students in the CS major that is cross-listed with the current MSA Course listed as MSA 6500.
SP 2015	**Graduate Course Modifications. CS 6640 Software Engineering.** Updated pre-requisite to accommodate program changes.
FA 2014 – SP 2015	**Core Program Modifications. CS 3060 Programming Languages.** Created the new CS 3060 Programming Languages course for addition to the CS Core Curriculum. The course is to be offered for the first time as a CS 3800 offering during the Summer of 2015. I was responsible for developing the course, preparing all paperwork, gaining faculty approval, and submitting the new course for approval.
FA 2014	**Undergraduate Course Modifications: CS 3140 Web Application Development**. Included new material on various aspects of JavaScript. Developed and included a new "Googling" assignment in order to teach problem solving skills to undergraduate level students. Continue to enhance through textbook selection and curriculum design.
FA 2014	**Graduate Course Modifications: CS 4400/5400. Optimization Techniques.** Developed new lectures, assignments, and tests. Introduced new technology including Gurobi Solver and the Python programming language.
SP 2014	**Graduate Course Modifications: CS 5290 Data Communications and Networking.** Updated book, assignments, and tests. Integrated new materials such as "World of Ends", physical examples of different types of network cables, and the short story "Water" from the collection "An Aura of Familiarity: Vision From the Coming Age of Networked Matter".
SP 2014	**Undergraduate Course Modifications: CS 3540 Introduction to Software Engineering.** New course. Updated all materials and techniques based on the book "Head First Software Development" in conjunction with Dr. Joe Chao. Brought in guest speakers on multiple occasions that were focused on Software Design and Development.
FA 2013	**Undergraduate Course Modifications: CS 3140 Web Application Development.** Updated technologies to include advanced technology like jQuery, jQueryUI, etc., reworked curriculum through inclusion of new sources, developed all labs, assignments, and tests
FA 2013	**Graduate Course Development: CS 6800. Availability and Reliability of Cloud Computing**. Created new, research-centric course focused on surveying the state-of-the-art and teaching students to perform basic research.

PROFESSIONAL DEVELOPMENT

SU 2020	Attended sessions at Microsoft Build Conference

SP 2020	BGSU Allies Program
SU 2019	Promoted to ACM Senior Member
SP 2019	Attended Seminar: Mentoring Doc Students for Non-Academic Careers
SP 2019	Attended Webcast: The Bayesian Zig Zag: Developing Probabilistic Models Using Grid Methods and MCMC
SP 2019	Attended Webcast: What Role for Programmers in the Age of AI
FA 2018	Attended Webcast: Using Gurobi to Optimize Distributed Energy Storage Assets
FA 2018	Attended Webcast: OpenMP and TBB Task Graphs
FA 2018	Attended Webcast: Under What Conditons will my Application give Reproducible Results?
SP 2018	Promoted to IEEE Senior Member
SP 2018	Active Learning Classroom Certification
SP 2018	Attended Webcast: What can Kotlin do for me?
SP 2018	Attended Webcast: CSSI Program Webinar 2
FA 2017	Attended Webcast: The Magic of Monte Carlo Tree Search
FA 2017	Attended Webcast: Cybersecurity for the Smart Grid: Challenges and R&D Directions
FA 2017	Attended Webcast: Are agile methodologies the right approach for industry – academia research collaboration?
FA 2017	Attended Webcast: Is Continuous Adoption in SE Achievable and Desirable?
SU 2017	Attended Webcast: An Introduction of Surrogate-Assisted Evolutionary Algorithm
SU 2017	Attended Webcast: Combining Optimization with Machine Learning for Better Decisions
FA 2016	Attended Webcast: #GitlabLive Event
FA 2016	Attended Webcast: Outsmart Hackers with Deep Learning AI
FA 2016	Attended Webcast: TensorFlow – A Framework for Scalable Machine Learning
SU 2016	Attended Webcast: Large-Scale Deep Learning with TensorFlow for Building Intelligent Systems
SP 2016	Attended Webcast: Pragmatic Introduction to Multicore Synchronization
SP 2016	Attended Webcast: Lies, Damned Lies, and Software Analytics
SP 2016	Attended Webcast: Making Big Data Processing Simple with Spark
SP 2016	Attended Webcast: Speaking Data: Simple Functional Programming with Clojure
SP 2016	Attended Webcast: YOGA: A Software Development Process Based on Ancient Principles
SP 2016	Attended Event: Creating a Community Engagement Network sponsored by Center for Civic and Community Engagement
FA 2015	Attended Webcast: Building Your First Big Data Application on AWS
SP 2015	Attended Webcast: Agile Methods: The Good, the Hype and the Ugly
FA 2014	Attended Webcast: C++ on GPUs Using OpenACC and the PGI Accelerator Compilers
SU 2014	Attended Safe & Secure Systems & Software Symposium (S5)
SP 2014	Participated in CRA Career Mentoring Workshop
FA 2013	Participated in Panel (Good doc, bad doc) at Consortium for Computing Sciences in Colleges, University of Findlay, Findlay, OH

FA 2013	Participated in the 2013 IEEE International Conference on Cloud Networking
FA 2013	Keynote speaker at 2013 IEEE Toledo Institute Night
FA 2013	Participated in NVIDIA Webinar: Pythonic Parallel Patterns for the GPU with NumbaPro
FA 2013	Participated in OpenStack's Webinar: OpenStack's Secrets to Success: Igniting Rapid Innovation and Growth through Community
FA 2013	Participated in Google's Introduction to Web Accessibility Online Course
FA 2013	Participate in CloudCore's Webinar: Make the Cloud Work for You - Not Against You
SP 2011 – SP 2015	Consulting via All Code LLC (Owned by Robert Green) in 1 major role: Wind Energy Corporation: Focused on 1) Gathering and analyzing data generated by single working unit in Harlingen, TX (currently over 80 million data points that have been analyzed by BGSU students Aswin Mathew and Anson D'Mello using Hadoop/MapReduce.), 2) Gathering and analyzing data generated through Wind & Solar Assessments at client locations, and 3) Maintaining web-based portal for Wind & Solar Assessment data analysis and presentation

RESEARCH INTERESTS

Primary: Computational Intelligence, High Performance Computing, Data Science, Cloud Computing
Professional: Software Development (Web, Mobile, Cloud, and HPC) & Data Analytics

RESEARCH PROJECTS & GRANTS

A) **Grants Under Review**

N/A

B) **Funded Grants**

SP 2021 – SU 2021	Marshall Plan Scholarship Fund, Visiting Scholar from University of Salzburg in Austria, Title: Anomaly Detection in Smart Grids with Deep Generative Models (PI, EUR 6,500 Stipend for Student)
SP 2020 – SU 2020	Marshall Plan Scholarship Fund, Visiting Scholar from University of Salzburg in Austria, Title: Improved Anomaly Detection in Computer Networks with Evolutionary Undersampling (PI, EUR 7,500 Stipend for Student)
FA 2019 – SP 2020	Internship Agreement with Senecio Corporation III (PI, Total: $9,477)
FA 2018 – SP 2019	Internship Agreement with Senecio Corporation II (PI, Total: $9,477)
SU 2018	Internship Agreement with Senecio Corporation (PI, Total: $2,844)
SU 2018 – FA2018	FRC "Building Strength" Grant Program, Title: Artificial Intelligence, sample size, and the future of data collection in the social sciences (Co-PI, My Share: $3,333 Total: $10,000)
SP 2017 – SU 2017	Marshall Plan Scholarship Fund, Visiting Scholar from University of Salzburg in Austria, Title: Anomaly Detection in Smart Grids with Imbalanced Data Methods, (PI, $7,930 (EUR 7,500) Stipend for Student)

FA 2016 – SP 2017	Fulton Grant, Title: Intelligent Anomaly Detection of High Velocity, Highly Variated Data Streams, (PI, Total: $20,000)
SP 2016 – SU 2016	Marshall Plan Scholarship Fund, Visiting Scholar from University of Salzburg in Austria, Title: Reduction of False Positives in Smart Grid Intrusion Detection, (PI, $7,949 (EUR 6,500) Stipend for Student)
FA 2015 – SU 2017	Ohio Mathematics and Science Partnership Program, Title: ONLS in Mathematics - Building a PK-5 Foundation for Success, (Co-PI, BGSU Share: $518,451).
SU 2015 – SU 2016	AWS in Education Research Grant, Title: Improving the Performance of Similarity Joins in Hadoop, (PI, $5,700 in Amazon Web Service Credits)
SP 2015 – FA 2015	FRC "Building Strength" Grant Program, Title: Developing Math-Ready Kindergarten Students through Adaptive Dual Platform Scalable Software Applications (Co-PI, My Share: $2,000 Total: $7,058)
SP 2014 – SU 2014	Marshall Plan Scholarship Fund, Visiting Scholar from University of Salzburg in Austria, Title: User-Centric Simulation of Demand Response Optimization (PI, $10,450 (EUR 8,000) Stipend for Student)
FA 2013	FRC "Building Strength" Grant Program, Travel Grants, Bowling Green State University, Proposal Title: 2013 IEEE CloudNet Paper Presentation (PI, $750)
SU 2013	DOE Early Career Grant, Pre-Application, Title: Highly Scalable Methods for Evaluating Complex Power Systems using Heterogeneous Computing Resources (PI, Encouraged to Submit Full Proposal)

C) **Unfunded Grants**

2019 SP	Ohio EPA, Title: Development and implementation of an app to engage citizen scientists in turtle conservation,(Co-PI, BGSU Share: $20,311)
2018	NIH STTR, Title: Donor/Recipient matching for kidney transplantation using HLA immunogenicity score, (Co-PI, BGSU Share: $50,000)
2018	Ohio EPA, Title: Development and implementation of an app to engage citizen scientists in turtle conservation,(Co-PI, BGSU Share: $20,311)
SP 2018	NSF CISE CRI, Title: II-New: Collaborative Research: HUVeT: Hybrid Unmanned Aerial Vehicle Testbed for Cyber Security Attack Analysis and Mitigation, (Co-PI, BGSU Share: $130,395)
SP 2017	Shantanu and Reni Narayen Endowed Professorship in Computer Science Bowling Green State University, Title: DevOps from Day One: Integrating Version Control, Continuous Integration, and Containerized Development into Core Curriculum and Research, (PI, $45,000)
SP 2017	NSF CISE CRI, Title: II-New: Collaborative Research: HUVeT: Hybrid Unmanned Aerial Vehicle Testbed for Cyber Security Attack Analysis, Modeling and Mitigation, (Co-PI, My Share: $122,421, Total: $750,000)

FA 2016	NSF I-Corps, Title: Intelligent Software Defined Routing and Network Design (Co-PI, My Share: $25,000 ($50,000 total) Collaborative Proposal with University of Toledo
SP 2016	NSF CISE CRI, Title: HUVeT - Hybrid Unmanned Aerial Vehicle Testbed for Cyber Security Attack Analysis and Mitigation, (Co-PI, $125,363, ($442,303 total))
SP 2015	NSF CyberSEES Title: CyberSEES: Type 2: Collaborative Research: Cloud-based Power System Analysis and Optimization as a Sustainable Service (PI, $594,963 ($1,199,937 total) Collaborative Proposal with Michigan State University
2014	NSF IUSE, Title: Supporting CS-focused STEM Education via Active Learning, Mentoring, and Scholarships (Co-PI, $250,000)
SU 2014	NSF CRII, Title: CRII: CSR: Foundations for Multi-Class Over-subscription of Resources in the (Federated) Cloud (PI, $175,000)
SP 2014	NSF Cyberlearning and Future Learning Technologies, Title: EXP: Collaborative Research: Applying Data Mining to Explore the Facilitation of Project-Based Science Learning through Mobile Technology (PI, $79,772, Collaborative Proposal with University of Toledo)
SP 2014	NSF PRIME, Title: Clarity: The Development of a Social Network Analysis Tool for the Evaluation of the Quality and Functionality of Partnerships (Co-PI, $250,000, Subcontract with Acumen Research and Evaluation, LLC)
SP 2014	NSF SSE & SSI2, Title: SI2-SSE: Collaborative Research: A Scalable and Accelerated Framework for Methods in the Probabilistic Evaluation of Composite Power Systems (PI, Lead Institution, $324,833, Collaborative Proposal with Michigan State University)
SP 2014	Silicon Mechanics Research Cluster Grant Program, (PI, $195,000)
FA 2013	NSF CISE Research Infrastructure Program, Title: II-New: Accelerator-based Heterogeneous Computing Infrastructure for Data-Driven & Information-Driven Applications (Co-PI, $750,000, Joint Proposal with Ohio Supercomputing Center)
FA 2013	Google Faculty Research Awards, Proposal Title: Scalable Methods for the Design and Evaluation of Highly Reliable and Highly Utilized Cloud Computing Systems (PI, $57,461)
FA 2013	NSF Integrated NSF Support Promoting Interdisciplinary Research and Education Program, Proposal Title: Track 1: Compounded Sterile Preparations in Education and Practice: Cyber-physical Methods for Reducing Errors and Saving Lives (PI, $800,000, Joint Proposal Letter of Intent with University of Toledo)
SU 2013	NIH NBIB R21, Proposal Title: Computational Support Systems for Compounding Sterile Products (PI, $275,000)

SP 2013	NSF Cyber learning: Transforming Education, Title: CAP: Mining Student Interactions through Mobile Technology in Inquiry-Based Science (Co-PI, $50,000)
SP 2013	NSF DRL, Title: CAP: Clarity: The Development of a Network Analysis Tool for the Evaluation of Partnerships - An Exploratory Project Proposal (Co-PI, $250,000, Joint Proposal with Acumen Research and Evaluation, LLC)
SP 2013	Silicon Mechanics Research Cluster Grant Program, (PI, $78,000)
FA 2012	NSF Computer and Network Systems Core, Computer Systems Research, Proposal Title: CSR: Small: A Quantitative Framework for Availability Modeling and Evaluation of Cloud Computing Systems (PI, $500,000)

D) **Project Collaborations**

2017 – Present	Collaborative effort with Dr. Stanislaw Stepkowski and Dr. Dulat Bekbolsynov at the University of Toledo Medical Center. Focused on improving kidney transplant matching procedures using computational science. Has resulted in multiple pieces of software, two journal publications under review, two published abstracts, one MS project, and one MS thesis.
2015 – 2020	Collaborative effort with Dr. Christopher Rump of the Applied Statistics and Operations Research Department in evaluating and improving the computational performance of various, difficult optimization problems that fall under the large category of p-median and p-center problems.
2014 – 2016	Collaborative effort with Bill Cave (Visual Software International, Inc.) and Henry Ledgard (University of Toledo) regarding new methods of parallel programming, enhanced parallelism in multicore systems, and issues regarding in productivity and understandability in programming languages.
2014 – 2016	Collaborative effort with Ken Newbury and Deborah Wooldridge (Director, FCS/Professor, Family & Consumer Sciences, BGSU) via the Agile Software Factory. The collaboration is focused on building applications that allow for measurement and intervention regarding math education at pre-K, K-12, and College levels. The results of this project led to the award of a grant from the Ohio Mathematics and Science Partnership Program.
2013 – 2015	Collaborative effort with the University of Toledo (Dr. Mansoor Alam) and University of Massachusetts at Lowell (Dr. Wei Cheng) on NSF Grant #1248381 (EAGER: Collaborative Research: Time Critical Localization in Mobile Networks). Co-Advise/Direct research of a group of multiple Ph.D. and M.S. students.
2013 – 2016	A collaborative effort in undergraduate research with Dr. Justin Lambright (Mathematics), Dr. Courtney Taylor (Mathematics), and Nathan Nieman (Undergraduate) at Anderson University, evaluating the impact of parallel acceleration on p-polynomials.

PUBLICATIONS

A) **Preprints**

[1] D. Schellhas, B. Neupane, D. Thammineni, B. Kanumuri, and R. C. G. II, "Distance correlation sure independence screening for accelerated feature selection in parkinson's disease vocal data," June 2020.

B) **Journal Articles**

[2] D. Bekbolsynov, B. Mierzejewska, J. Borucka, J. Breidenbach, B. Gehring, S. Leonard-Murali, S. Khuder, M. Rees, R. C. G. II, and S. Stepkowski, "Low Hydrophobic Mismatch Scores Calculated for HLA-A/B/DR/DQ Loci Improve Kidney Allograft Survival," *Frontiers in Immunology.* Article in Press.

[3] J. im Choi and R. C. G. II, "Enhanced resampling and feature selection for improved bank subscription prediction," *Expert Systems With Applications.* Under Review, submitted January 2020.

[4] K. R. Alasmari, A. Y. Javaid, R. C. G. II, and M. Alam, "Mobile edge offloading considering user preferences," *Engineering Reports.* Under Review, submitted January 2020.

[5] B. Snyder, R. C. G. II, V. Devabhaktuni, and M. Alam, "ReliaCloud-NS: A scalable web-based simulation platform for evaluating the reliability of cloud computing systems," *Software: Practice and Experience*, vol. 48, pp. 665–680, March 2018.

[6] R. C. G. II and V. Agrawal, "A case study in multi-core parallelism for the reliability evaluation of composite power systems," *Journal of Supercomputing*, pp. 5125–5149, December 2017.

[7] R. C. G. II, "Focus Driven Development: The "Could" and "Should" of Software Design," *J. Comput. Sci. Coll.*, vol. 33, pp. 72–76, October 2017.

[8] M. Nasseri, J. Kim, R. Green, and M. Alam, "Identification of Optimum Relocation Time in Mobile Wireless Sensor Network using Time-Bounded Re-localization Methodology," *IEEE Transactions on Vehicular Technology*, pp. 344–357, January 2017.

[9] W. Laussenhammer, D. Engel, and R. Green, "Utilizing Capabilities of Plug In Electric Vehicles with a new Demand Response Optimization Software Framework: Okeanos," *International Journal of Electrical Power and Energy Systems*, vol. 75, pp. 1–7, February 2016.

[10] S. Gadde, W. Acosta, J. Ringenberg, R. Green, and V. Devabhaktuni, "Achieving Optimal Inter-Node Communication in Graph Partitioning using Random Selection and Breadth-First Search," *International Journal of Parallel Computing*, vol. 44, pp. 772–800, August 2016.

[11] B. Snyder, J. Ringenberg, R. Green, V. Devabhaktuni, and M. Alam, "Evaluation and Design of Highly Reliable and Highly Utilized Cloud Computing Systems," *Journal of Cloud Computing: Advances, Systems, and Applications*, vol. 4, pp. 1–16, May 2015.

[12] R. Householder and R. Green, "Impacts of Multi-Class Oversubscription on Revenues and Performance in the Cloud," *International Journal of Cloud Computing*, vol. 2, January–March 2015.

[13] M. Nasseri, R. Green, M. Alam, J. Kim, V. Devabhaktuni, and W. Cheng, "Collaborative Re-Localization Method in Mobile Wireless Sensor Network Based on Markov Decision Process," *International Journal of Computer Networks*, vol. 6, pp. 76–107, September 2014.

[14] H. Al-Olimat, R. C. G. II, M. Alam, V. Devabhaktuni, and W. Cheng, "Particle Swarm Optimized Power Consumption of Trilateration," *International Journal of Foundations in Computer Science*, vol. 4, pp. 1–19, July 2014.

[15] M. Lakshminarayanan, W. Acosta, R. C. G. II, and V. Devabhaktuni, "Strategic and Suave Processing for Efficient and Scalable Similarity Joins Using MapReduce," *Journal of Supercomputing*, vol. 8, pp. 1–25, May 2014.

[16] R. Householder, S. Arnold, and R. Green, "On Cloud-based Oversubscription," *International Journal of Engineering Trends and Technology*, vol. 8, pp. 425–431, February 2014.

[17] R. C. G. II, L. Wang, M. Alam, and C. Singh, "Intelligent state space pruning for monte carlo simulation with applications in composite power system reliability," *Engineering Applications of Artificial Intelligence*, vol. 26, pp. 1707–1724, August 2013.

[18] R. C. G. II, L. Wang, and M. Alam, "Applications and trends of high performance computing for electric power systems: Focusing on smart grid," *IEEE Transactions on Smart Grid*, vol. 4, pp. 922–931, June 2013.

[19] S. Depuru, L. Wang, V. Devabhaktuni, and R. C. G. II, "High performance computing for detection of electricity theft," *International Journal of Electrical Power & Energy Systems*, vol. 47, pp. 21–30, May 2013.

[20] V. Devabhaktuni, M. Alam, S. Depuru, R. C. G. II, D. Nims, and C. Near, "Solar energy: trends and enabling technologies," *Renewable and Sustainable Energy Reviews*, vol. 19, pp. 555–564, March 2013.

[21] H. Gudavalli, J. Ringenberg, S. Depuru, R. C. G. II, R. Molyet, and V. Devabhaktuni, "A review of global energy education initiatives," *International Journal of Advances in Science and Technology*, vol. 5, December 2012.

[22] R. C. G. II, L. Wang, M. Alam, and R. A. Formato, "Central force optimization on a GPU: A case study in high performance metaheuristics," *Journal of Supercomputing*, vol. 62, pp. 378–398, October 2012.

[23] R. Moslemi, M. Esmaili, H. A. Shayanfar, L. Wang, and R. C. G. II, "Multi-objective environmental optimal power flow considering transient stability improvement," *International Review of Electrical Engineering*, vol. 7, pp. 3443–3453, February 2012.

[24] R. C. G. II, L. Wang, and M. Alam, "Training neural networks using central force optimization and particle swarm optimization: Insights and comparisons," *Expert Systems with Applications*, vol. 39, pp. 555–563, January 2012.

[25] R. Green and H. Ledgard, "Coding guidelines: Finding the Art in the Science," *Communications of the ACM*, vol. 54, pp. 57–63, December 2011.

[26] R. Green and H. Ledgard, "Coding guidelines: Finding the Art in the Science," *Queue*, vol. 9, pp. 1–13, December 2011.

[27] R. C. G. II, L. Wang, and M. Alam, "The impact of plug-in hybrid electric vehicles on distribution networks: A review and outlook," *Renewable and Sustainable Energy Reviews*, vol. 15, no. 1, pp. 544–553, 2011.

C) **Unrefereed Journal**

[28] C. Gunnett, H. Schneider, and R. Green, "Good doc, bad doc: teaching effective documentation in programming courses," *Journal of Computing Sciences in Colleges*, vol. 29, pp. 92–93, October 2013.

D) **Conference Proceedings**

[29] T. Charest and R. C. G. II, "Implementing Central Force Optimization on the Intel Xeon Phi," in *IEEE International Parallel and Distributed Processing Symposium Workshops*, (New Orleans, Louisianna), pp. 502–511, IEEE, May 2020.

[30] K. R. Alasmari, R. C. G. II, and M. Alam, "Mobile edge offloading using markov decision processes," in *Edge Computing – EDGE 2018* (S. Liu, B. Tekinerdogan, and L.-J. Aoyama, Mikioand Zhang, eds.), (Seattle, Washington), pp. 80–90, Springer International Publishing, June 2018.

[31] R. C. G. II, "Neighborhood topologies in central force optimization," in *Symposium Series on Computational Intelligence*, (Honolulu, Hawaii, US), pp. 572–579, IEEE, November/December 2017.

[32] C. Promper, D. Engel, and R. C. G. II, "Anomaly detection in smart grids with imbalanced data methods," in *Symposium Series on Computational Intelligence*, (Honolulu, Hawaii, US), pp. 1963–1970, IEEE, November/December 2017.

[33] R. C. G. II and J. T. Chao, "Ten years of the agile software factory for software engineering education and training," in *Conference on Software Engineering, Education, and Training*, (Savannah, Georgia, US), pp. 182–186, IEEE, November 2017.

[34] S. Shekaforoush and R. Green, "Classifying Commit Messages: A Case Study in Resampling Techniques," in *International Joint Conference on Neural Networks*, (Anchorage, Alaska, US), pp. 1273–1280, IEEE, May 2017.

[35] A. Shakiba, R. Green, and R. Dyer, "FourD: Do Developers Discuss Design? Revisited," in *Proceedings of the 2nd International Workshop on Software Analytics*, SWAN 2016, (New York, NY, USA), pp. 43–46, ACM, November 2016.

[36] J. Yalamanchili, R. C. G. II, K. S. Xu, and V. Devabhaktuni, "Performance Enhanced Multiset Similarity Joins," in *2016 IEEE International Conferences on Big Data and Cloud Computing (BDCloud), Social Computing and Networking (SocialCom), Sustainable Computing and Communications (SustainCom) (BDCloud-SocialCom-SustainCom)*, pp. 21–28, October 2016.

[37] J. Lückenga, D. Engel, and R. Green, "Weighted vote algorithm combination technique for anomaly based smart grid intrusion detection systems," in *International Joint Conference on Neural Networks (IJCNN)*, (Vancouver, Canada), pp. 2738–2742, July 2016.

[38] J. Storer and R. Green, "PSO Trained Neural Networks for Predicting Forest Fire Size: A Comparison of Implementation and Performance," in *International Joint Conference on Neural Networks (IJCNN)*, (Vancouver, Canada), pp. 676–683, July 2016.

[39] H. Al-Olimat, R. Green, M. Alam, and J. Lee, "Cloudlet Scheduling with Particle Swarm Optimization," in *IEEE International Conference on Communication Systems and Computing Application Science*, (Jeju Island, South Korea), pp. 991–995, May 2015.

[40] C. Zhang and R. Green, "Communication Security in Internet of Thing: Preventive Measure and Avoid DDoS Attack Over IoT Network," in *Spring Simulation Multi-Conference*, (Alexandria, Virginia), pp. 8–15, April 2015.

[41] M. Nasseri, H. Al-Olimat, M. Alam, J. Kim, R. Green, and W. Cheng, "Contiki Cooja Simulation for Time Bounded Localization In wireless Sensor Network," in *Spring Simulation Multi-Conference*, (Alexandria, Virginia), pp. 1–7, April 2015.

[42] W. Lausenhammer, D. Engel, and R. Green, "A Game Theoretic Software Framework for Optimizing Demand Response," in *IEEE Innovative Smart Grid Technologies*, (Washington, DC), pp. 1–5, February 2015.

[43] N. Nieman, J. Lambright, C. Taylor, and R. Green, "Quantum Polynomial Ring: Computing the p-polynomials," in *Midstates Conference for Undergraduate Research in Computer Science and Mathematics*, (Wooster, Ohio), November 2014.

[44] R. Householder, S. Arnold, and R. Green, "Simulating the Effects of Cloud-based Oversubscription On Data Center Revenues and Performance in Single and Multi-class Service Levels," in *IEEE CLOUD*, (Anchorage, Alaska), pp. 562–569, June/July 2014.

[45] C. Zhang, R. Green, and M. Alam, "Reliability and Utilization Evaluation of a Cloud Computing System Allowing Partial Failures," in *IEEE CLOUD*, (Anchorage, Alaska), pp. 936–937, June/July 2014.

[46] B. Snyder, R. Green, M. Alam, and V. Devabhaktuni, "Evaluation of Highly Reliable Cloud Computing Systems using Non-Sequential Monte Carlo Simulation," in *IEEE CLOUD*, (Anchorage, Alaska), pp. 940–941, June/July 2014.

[47] J. Philips, R. C. G. II, and M. Alam, "Time-of-Flight Distance Measurements using Smart Phones," in *IEEE Mobile Services*, (Anchorage, Alaska), pp. 153–154, June/July 2014.

[48] M. Nasseri, R. C. G. II, and M. Alam, "MDP Based Optimal Policy for Collaborative Processing using Mobile Cloud Computing," in *IEEE International Conference on Cloud Networking*, (San Francisco, California), pp. 123–129, November 2013.

[49] R. C. G. II, L. Wang, M. Alam, and C. Singh, "Latin Hypercube Sampling for the Probabilistic Evaluation of Composite Power System Reliability," in *International Conference on Probabalistic Methods Applied to Power Systems*, (Istanbul, Turkey), pp. 1–8, June 2012.

[50] R. C. G. II, L. Wang, M. Alam, and C. Singh, "Evaluating the Impact of Low Discrepancy Sequences on the Probabilistic Evaluation of Composite Power System Reliability," in *IEEE/PES General Meeting*, (San Diego, CA), pp. 1–8, July 2012.

[51] R. C. G. I. L. Wang and M. Alam, "Binary Central Force Optimization and Local Search in Intelligent State Space Pruning for Power System Reliability Evaluation," in *IEEE/PES Innovative Smart Grid Technologies*, (Berlin, Germany), pp. 1–8, October 2012.

[52] A. Bandyopadhyay, L. Wang, V. Devabhaktuni, R. Yang, and R. C. G. II, "Assessing the Effect of Fast Charging on Overall PHEV Battery Health," in *IEEE/PES General Meeting*, (San Diego, CA), pp. 1–8, July 2012.

[53] R. C. G. II, L. Wang, M. Alam, and C. Singh, "Intelligent and parallel state space pruning for power system reliability analysis using MPI on a multicore platform," in *IEEE Conference on Innovate Smart Grid Technologies*, (Anaheim, California), pp. 1–8, January 2011.

[54] R. C. G. II, L. Wang, M. Alam, and C. Singh, "State space pruning for reliability evaluation using binary particle swarm optimization," in *IEEE Power Systems Conference and Exposition*, (Phoenix, Arizona), pp. 1–8, March 2011.

[55] R. C. G. II, L. Wang, M. Alam, and R. Formato, "Central force optimization on a GPU: A case study in high performance metaheuristics using multiple topologies," in *IEEE Congress on Evolutionary Computation*, (New Orleans, Louisianna), pp. 550–557, June 2011.

[56] R. C. G. II, L. Wang, M. Alam, and C. Singh, "Intelligent state space pruning using multi-objective PSO for reliability analysis of composite power systems: Observations, analyses, and impacts," in *IEEE/PES General Meeting*, (Detroit, Michigan), pp. 1–8, July 2011.

[57] R. C. G. II, L. Wang, and M. Alam, "High performance computing for electric power systems: Applications and trends," in *IEEE/PES General Meeting*, (Detroit, Michigan), pp. 1–8, July 2011.

[58] R. C. G. II, L. Wang, M. Alam, C. Singh, and S. S. S. R. Depuru, "An examination of artificial immune system optimization in intelligent state space pruning for LOLP estimation," in *IEEE North American Power Symposium*, (Boston, Massachusetts), pp. 1–7, August 2011.

[59] R. C. G. II, L. Wang, M. Alam, and S. S. S. R. Depuru, "Evaluating the impact of plug-in hybrid electric vehicles on composite power system reliability," in *IEEE North American Power Symposium*, (Boston, Massachusetts), pp. 1–7, August 2011.

[60] R. C. G. II, L. Wang, and M. Alam, "Composite power system reliability evaluation using support vector machines on a multicore platform," in *IEEE International Joint Conference on Neural Networks*, (San Jose, California), pp. 2586–2592, August 2011.

[61] A. Bandyopadhyay, L. Wang, V. Devabhaktuni, and R. C. G. II, "Aggregator Analysis for Efficient Day-Time Charging of Plug-in Hybrid Electric Vehicles (PHEVs)," in *IEEE/PES General Meeting*, (Detroit, Michigan), pp. 1–8, July 2011.

[62] Y. Zhang, L. Wang, W. Sun, R. C. G. II, and M. Alam, "Distributed intrusion detection system in a multi-layer network architecture of smart grids," *IEEE Transactions on Smart Grid*, vol. 2, pp. 796–808, December 2011.

[63] Y. Zhang, W. Sun, L. Wang, H. Wang, R. C. G. II, and M. Alam, "A multi-level communication architecture of smart grid based on congestion aware wireless mesh network," in *North American Power Symposium 2011*, (Boston, Massachusetts), pp. 1–6, August 2011.

[64] Y. Zhang, L. Wang, W. Sun, R. C. G. II, and M. Alam, "Artificial immune system based intrusion detection in a distributed hierarchical network architecture of smart grid," in *IEEE/PES General Meeting*, (Detroit, Michigan), pp. 1–8, July 2011.

[65] Z. Wang, R. Yang, L. Wang, R. C. G. II, and A. Dounis, "A fuzzy adaptive comfort temperature model with grey predictor for multi-agent control system of smart building," in *IEEE Congress on Evolutionary Computation*, (New Orleans, Louisianna), pp. 728–735, June 2011.

[66] R. C. G. II, Z. Wang, L. Wang, M. Alam, and C. Singh, "Evaluation of loss of load probability for power systems using intelligent search based state space pruning," in *IEEE International Conference on Probabilistic Methods Applied to Power Systems*, (Singapore), pp. 319–324, June 2010.

[67] R. C. G. II, L. Wang, and C. Singh, "State space pruning for power system reliability evaluation using genetic algorithms," in *IEEE/PES Society General Meeting*, (Minneapolis, Minnesota), pp. 1–6, July 2010.

[68] R. C. G. II, L. Wang, Z. Wang, M. Alam, and C. Singh, "Power system reliability assessment using intelligent state space pruning techniques: A comparative study," in *IEEE Conference on Power System Technology*, (Hangzhou, China), pp. 1–8, October 2010.

[69] D. Myers and R. Green, "Obtaining bounds for linear programs with interval coefficients," in *INFORMS*, 2007.

E) **Abstracts**

[70] D. Bekbolsynov, B. Mierzejewska, J. Borucka, S. Khuder, M. Rees, R. C. G. II, and S. Stanislaw, "Low physiochemical immunogenicity scores improve long-term survival of deceased donor kidney transplants," *American Journal of Transplantation*, vol. 20, May 2020. Peer Reviewed Abstract.

[71] D. Bekbolsynov, O. Ekwenna, B. Mierzejewska, J. Borucka, S. Khuder, M. Rees, R. C. G. II, and S. Stepkowski, "Improving Access to Transplantation and Outcomes for African American Patients," *American Journal of Transplantation*, vol. 20, May 2020. Peer Reviewed Abstract.

[72] C. King, R. Green, and C. Rump, "Population-based Metaheuristics for Fairer Facility Location," in *INFORMS*, (Houston, TX), September 2017. Peer Reviewed Abstract.

[73] S. Gadde, R. C. G. II, W. Acosta, and V. Devabhaktuni, "On the use of Particle Swarm Optimization with Breadth First Search for Partitioning Large Graphs," in *International Symposium on Innovation in information Technology and Application*, (Kota Kinabalu, Malaysia), January/February 2018. Peer Reviewed Extended Abstract.

[74] J. Faisant and R. Green, "Can they Use It? Studying the Usability of the Canvas LMS at Bowling Green State University," in *Ohio Academy of Science*, (Dayton, OH), April 2017. Peer Reviewed Abstract.

[75] H. Renny and R. Green, "Scaling Central Force Optimization for Modern Parallel Architectures," in *Ohio Academy of Science*, (Dayton, OH), April 2017. Peer Reviewed Abstract.

F) **Unrefereed Conference**

[76] N. Nieman, J. Lambright, C. Taylor, and R. Green, "Adventures in the Quantum Polynomial Ring: Linear Algebra Computations C," in *Anderson University Scholar's Day*, (Anderson, Indiana), April 2014. Poster Presentation.

G) **Software Artifacts**

FA 2017 – Present

Kidney Transplant Data Analysis. Developed in conjunction with the collaborators from the University of Toledo, University of Toledo Medical Center, and Cambridge, this software performs data analysis for improving kidney transplantation and predicting graft failure. The software combines data analytics with computational intelligence. A portion of the software is available at `https://gitlab.com/sarahysh12/kidney-transplant-data-analysis/` Private repository at `https://gitlab.com/kidney-research/kidney-transplant-data-analysis/`.

FA 2016 – SP 2018

RAINS. The fast, reliable, scalable, and real-time analysis of large streams of Big Data is a challenging task that is being faced across a variety of industries. This paper introduces RAINS: a novel architecture for analyzing multiple streams of streaming data for Real-time Analysis IN Spark using Apache Spark, Kafka, and Cassandra. The proposed framework is novel in that 1) It is built on a micro-services architecture, allowing it to become highly scalable and deployable, 2) It can handle multiple streams of (un)related for analysis in multiple ways, 3) It incorporates a X-in-the-loop verification system where "X" may refer to humans, ensembles, etc., and 4) It provides multiple benefits over current state-of-the-art systems like MOA. For testing, the proposed framework is applied to a fundamental security data set where good results are demonstrated. Further, the architecture of RAINS is compared with that of other streaming data analysis tools. Available at `https://gitlab.com/streaming-data/RAINS`

FA 2015 – SP 2016

GA Time Tracking. Developed in conjunction with the Agile Software Factory, this software was developed in order to provide a mechanism for tracking GA time worked. Initially, this work was considered by the University as a time tracking alternative and was also collaboratively used by multiple departments (Computer Science, German, Russian, and East Asian Languages, Musical Arts, English, Applied Statistics and Operations Research, and Technology) for time tracking and reporting purposes.

SP 2015 – SU 2016

Python Intrusion Detection. Developed in conjunction with the University of Applied Sciences in Salzburg, Austria, this software is used to test a classifier voting mechanism for detecting cyber-security intrusions in the Smart Grid using Computational Intelligence techniques. The KDD-NSL and KDD-Cup 1999 Datasets are the provided features to train and test different types of classifiers. The software allows for the implementation and evaluation of various intrusion detection algorithms using the ensemble methodology. Available at `https://bitbucket.org/bgsufhs/python-intrusion-detection` and `https://gitlab.com/bgsufhs/python-intrusion-detection`.

SP 2015 – SU 2016

Combox. This software is a rewrite of the C#-based ComboBox below that is written in Python in order to achieve cross-platform performance. The project is completely open-sourced, includes a variety of software tests and performance benchmarks, and has been incorporated into the Python pip environment for easy installation and development. The project is available at `https://git.ricketyspace.net/combox/` and `https://gitlab.com/combox/combox`.

SP 2012 – Present

ReliaCloud-NS. Developed as a system simulation tool for evaluating the reliability of cloud computing systems considering non-sequential methods, this software leverages some of the latest technologies including the Play Framework, PostgreSQL, and MongoDB. The project is open-source and privately available for research via `https://bitbucket.org/rgreen13/reliacloud-ns` and `https://gitlab.com/cloud-reliability/ReliaCloud-NS`.

SP 2012 – Present

Central Force Optimization. A codebase written in C++ and Python containing both a procedural and object-oriented version of this deterministic, population-based metaheuristic algorithm. The project is open-source and privately available for research via `https://gitlab.com/central-force-optimization`.

SU 2015 – FA 2015

GSO Registration Application. This is a mobile and web-based application that was used during Graduate Student Orientation in the Fall of 2015. The app allows for the tracking of students attendance at various events through the use of QR codes while providing a web-based backend for reporting. The software leverages state-of-the-art technology like Node.js and Apache Cordova and works on all mobile platforms.

FA 2014 – SP 2015

How Many? This is a mobile application intended for math intervention at various levels of education including pre-K, K-2, K-12, and College levels. The app is capable of gathering behavioral data via a game-like interface and storing this data for analysis. This app is being developed in conjunction with the Agile Software Factory and various other collaborators on the BGSU campus.

FA 2014 – SP 2015

CloudSim-BG. In order to study advanced techniques in effectively and economically allocating resources in a cloud computing system, my research team has successfully modified the CloudSim tool in order to evaluate the impacts of multi-class pricing models in the cloud. The software is currently being further extended in order to aid in the evaluation of reliability and availability of cloud computing systems.

SP 2014 – SP 2016

Okeanos. Particularly with respect to coordinating power consumption and generation, demand response (DR) is a vital part of the future smart grid. Even though, there are some DR simulation platforms available, none makes use of game theory. Okeanos is a fundamental, game theoretic, Java-based, multi-agent software framework for DR simulation that allows an evaluation of real-world use cases. While initial use cases are based on game theoretic algorithms and focus on consumption devices only, further use cases evaluate the effects of plug in electric vehicles (PEVs). Results with consumers show that the number of involved households does not affect the costs per household. Further evaluation involving PEVs demonstrates that with an increasing penetration of PEVs and feed-in tariffs the costs per household per month decrease. Available at `https://github.com/wolfgang-lausenhammer/Okeanos`.

FA 2014 – SP 2016

p-Polynomials. Developed in conjunction with Anderson University, this software was developed in order to calculate and record the p-Polynomials of any order. Currently, experiments have yielded results considering an order of up to 10. The software is written in C/C++ and leverages the OpenMP library for (recursive) parallel computation.

FA 2014 – SP 2015	**ComboBox.** This software is a cloud file storage aggregator that provides a high level of security as 1) Users are required to offer no personal information and 2) All data is encrypted and split into pieces for secure storage across multiple services. The project was originally developed using Microsoft C# and is available as an open-source project via `https://bitbucket.org/bgsucodeloverslab/combobox/`.
FA 2013 – SP 2015	**Essential Localization Android Application.** Developing in conjunction with the University of Toledo, an Android application is in development that will allow researchers to effectively study localization algorithms using testbeds of Android-based devices that are on the same WiFi network. Once completed, the source code will be released as open-source and used for various research questions regarding localization in the real world.

INVITED TALKS

SP 2020	"Artificial Intelligence & Data," Great Decisions.
SP 2019	"Docker Workshop: Git Hands on with Containers," ACM Event.
FA 2018	"Git with It, " ASF Mock Interview Event.
SP 2015	"My Experiences with Wind," IEEE Toledo Section.
FA 2013	"Reliability and the Smart Grid: Issues and Methods," IEEE Toledo Institute Night.
SP 2013	"For the Love of Code," Graduate Seminar at Bowling Green State University.
SP 2013	"Finding the Art in Computer Science," Ohio Northern University.
FA 2012	"Head in the Clouds: An Overview of Cloud Computing," University of Toledo.
FA 2012	"Computational Advances in Central Force Optimization," University of Akron.
FA 2012	"The 'Art' of Computer Science," ACM Tech Talk, University of Toledo.
SP 2011	"CUDA: Basics and Applications," Physics Dept., University of Toledo.

SERVICE

A) Department

FA 2020	EPR Chair
FA 2020	Peer Reviews
FA 2020	CS 1, 2, 3 Committee
SP 2020	APR Reviews
FA 2019	Member, Review, Tenure, & Promotion Committee
FA 2019	Member, Faculty Search Committee
FA 2019	Member, Capstone Course Committee for Computer Science and Software Engineering
SU 2019	Fulton Grant Reviewer
SP 2019	Attended Nationwide InfoTech Conference
FA 2018	Performed Peer Reviews & Evaluations
FA 2018 – SP 2019	Department Ambassador to Capital Campaign
FA 2018 – SP 2019	Secretary Search Committee
FA 2018 – FA 2019	Member, 50th Anniversary Committee
SP 2018 – Present	Department Representative on Data Science Graduate Committee
FA 2018 – SP 2021	Course Coordinator for CS 4170/5170: Intro. to Parallel Programming, CS 3140: Web Application Development, and CS 4540: Software Engineering Project

SP 2018	Fulton Grant Reviewer
FA 2017 – SP 2018	Curriculum Revision Committee for CS 2010/2020/3350
FA 2017	ESL Recruitment Webinar
SP 2017	Computer Science & Technology Graduate School Virtual Fair Participant
SP 2017	President's Day Participant
SP 2017	Developed list of Research Impediments & Opportunities for Department
FA 2016 – Present	CSAB, Academic Co-Chair
FA 2016 – 2018	CSAB, Chair of Standing Committee on Networking and Collaboration
FA 2015 – Present	Graduate Coordinator, Dept. of Computer Science (Advising, Marketing, Recruiting, etc. Includes single course release.)
FA 2015 – SP 2018	Course Coordinator for CS 3060, CS 3140, and CS 4400
FA 2015	Chair, Task Force on Faculty Lines
SP 2015	Leading Computer Science Professional Pledge
FA 2014 – SP 2016	Director, Agile Software Factory
FA 2014 – Present	Member of Computer Science Advisory Board (CSAB)
FA 2014 – FA 2016	CSAB, Chair of Standing Committee on Resources and Development
FA 2014 – SP 2015	Course Coordinator for CS 3540
SP 2014 – SP 2016	Virtual Machine Strategy for CS Department
FA 2014 – SP 2015	Member, Graduate Committee
FA 2014	Talk: "Technical Presentation Tips" at Graduate Student Orientation
FA 2014 – SP 2015	Preview Day & President's Day
SP 2014	Leading Computer Science Professional Pledge
FA 2013 – SP 2014	Member, Tenure, Promotion, and Review Sub-Committee
FA 2013 – SP 2014	Member, Facilities Committee
FA 2013 – SP 2015	Member, Assessment Sub-Committee

B) College

SP 2020	Member, Task Force on Graduate Education
SP 2019	Member, Graduate Dean Review Committee
FA 2018 – FA 2019	Mentor in Faculty Mentoring Program (2 Mentees)
FA 2016 – Present	Chair, Chair of Committee on Graduate Curriculum Review, Graduate Council
SP 2016	GA Time Tracking Initiative
FA 2015 – Present	Member, Graduate Council
FA 2015 – SP 2016	Member, Committee on Graduate Student Issues, Graduate Council

C) University

SP 2020	CCGS Program Reviewer
SP 2020	Graduate College Task Force
FA 2019	Panelist, Graduate Student Professional Development Day
SP 2019	CCGS Program Reviewer (2 Proposals)
SP 2019	Onbase Testing
SP 2019 – Present	Member, VCT Faculty Search Committee
FA 2018 – Present	Graduate Coordinator, Data Science Program
FA 2018	CCGS Program Reviewer
SP 2017	CCGS Program Reviewer
SP 2016	Winifred Stone Diversity Presidential Scholarship Review Committee
SP 2015	Certificate of Proficiency in Cyber Operations Reviewer
SP 2015	Grants Management Application Testing

FA 2015	Co-Chair, Midstates Conference for Undergraduate Research in Computer Science and Mathematics
SP 2014	Computing and Information Technologies (CIT) Task Force
FA 2013 – SP 2014	Advisory Member, ITS FACES Project

D) Community Engagement

SP 2020	Guest lecture at Ohio Virtual Academy
SP 2019	WTOL Interview regarding Tik Tok App
FA 2017 – FA 2018	Taught eighth grade technology course at Timberstone Junior High School
SP 2017	Professor Panelist for CRU
FA 2016	Expert Interviewee by Technology Review
SP 2016 – Present	Creating and Supporting Townie Cup Web & Mobile Applications

E) Professional

SP 2020 – SP 2022	Editorial Board Member, Applied Soft Computing
FA 2020	Program Committee, International Conference on Computer Vision and Computational Intelligence
SP 2020	Program Committee, INFOCOM 2020
SU 2018	Abstract Reviewer for Ohio Academy of Science
FA 2017	Program Committee, ISIITA 2018
FA 2017 – SP 2018	Program Committee, CLOUD 2018
FA 2017	Program Committee, Midstates Conference on Undergraduate Research in Computer Science and Mathematics
FA 2017	Participant in Georgia Tech Transcript Parsing Study
SP 2017	Interviewed for Senior Thesis on Service-Learning Programs at VCU
2017	NSF Panelist
SP 2016	Program Committee Member, International Symposium on Advances in Applied Informatics
SU 2016	Program Committee Member, Fourth International Symposium on Intelligent Informatics
FA 2015	Program Committee Member, International Conference on Sustainable Energy Information Technology
FA 2015	Program Committee Member, 6th International Conference on Sustainable Energy Information Technology
2014 – 2015	NSF Panelist
SP 2014 – Present	Program Committee Member, International Symposium on BIG Data and Cloud Computing Challenges
SP 2013	OSC Grant Reviewer
SP 2013	Advisory Committee, 1st International Workshop on Cloud Computing and Cloud Applications
SP 2013	Technical Program Committee, IEEE 11th Annual Consumer Communications and Networking Conference, Special Session on Big Data, Security, and Privacy
FA 2013	Panelist, 2013 Midwest Consortium for Computing Sciences in College
2011 – Present	Occasional book reviewer for Manning Publications, Springer

2011 – Present	Occasional journal manuscript referee for: Applied Computing & Informatics, Applied Sciences, Applied Soft Computing, British Journal of Mathematics & Computer Science, Arabian Journal for Science and Engineering, Communications of the ACM, Concurrency and Computation: Practice and Experience, Energies, Energy and Buildings, IEEE Systems Journal, IEEE Transactions on Cloud Computing, IEEE Transactions on Neural Systems & Rehabilitation Engineering, IEEE Transactions on Smart Grid, IEEE Power Engineering Letters, International Journal of Electrical Power and Energy Systems, International Journal of Energy and Power, International Journal of High Performance Computing and Networking, Mathematical Problems in Engineering, Pervasive and Mobile Computing, Open Bioinformatics Journal, Journal of Cloud Computing: Advances, Systems, and Applications, Security and Communication Networks, FERMAT, PLOS ONE
2011 – Present	Occasional conference manuscript referee for: Conference on Advances in Computation, Communications and Services, IEEE International Joint Conference on Neural Networks, International Conf. on Parallel Proc. and Applied Mathematics, IEEE Symposium Series on Computational Intelligence, IEEE International Conference on Advances in Computing, Communications, & Informatics, , IEEE International Conference on Computer Communications, Midstates Conference for Undergraduate Research in Computer Science and Mathematics

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

2019 – Present	Senior Member, Association for Computing Machinery (ACM)
2018 – Present	Senior Member, Institute of Electrical and Electronics Engineers (IEEE) including Computer, Computational Intelligence, Cloud Computing, Communications, and Power & Energy Societies
2016 – Present	Member, Ohio Academy of Sciences
2013 – 2019	Member, Association for Computing Machinery (ACM)
2009 – 2018	Member, Institute of Electrical and Electronics Engineers (IEEE) including Computer, Computational Intelligence, Cloud Computing, Communications, and Power & Energy Societies

HONORS & AWARDS

2018–2019	Recognized by Center for Faculty Excellence for making a difference in BGSU student lives
2016–2017	Recognized by Center for Faculty Excellence for making a difference in BGSU student lives
2015–2016	Recognized by Center for Faculty Excellence for making a difference in BGSU student lives
2017	Nominated for the 2017 Master Teacher Award
2016	Nominated for the 2016 Master Teacher Award
2016	Outstanding Reviewer Status, Applied Soft Computing
2015	Nominated for the 2015 Master Teacher Award
2012 – 2013	Dissertation of the Year, UT Dept. of Electrical Engineering and Computer Science
2011	College of Business and Innovation Annual Advanced Leadership Academy Scholarship

2009 – 2010	Research/Teaching Assistant of the Year, UT Dept. of Electrical Engineering and Computer Science
2009 – 2010	Research/Teaching Assistant of the Year, UT College of Engineering