

Degrees

***Doctor of Philosophy* — University of Tennessee Knoxville, TN** **Expected August 2022**

- Department: Mathematics
- Concentration: Mathematical Biology
- Dissertation Project: *Linking Immuno-Epidemiology Principles to Violence*
 - Applying principles from Immuno-Epidemiology modeling to investigate how exposure to violence affects an individual's propensity to commit violence and, in turn, affect the spread and transmission dynamics violence in a community.
 - Advisors: Dr. Judy Day and Dr. Nina Fefferman
- GPA: 3.89/4.00

***Masters of Science* — University of Tennessee Knoxville, TN** **December 2019**

- Department: Mathematics
- GPA: 3.88/4.00

***Bachelor of Science* — Marquette University Milwaukee, WI** **May 2017**

- Major: Mathematics/Minor: Biological Sciences
- GPA: 3.89/4.00

***Associate of Science* — Rock Valley College Rockford, IL** **August 2015**

- GPA: 3.81/4.00

Research Experience

Internship **Summer 2018**

Oak Ridge National Lab

- Project: *On a Gradient System Related to the Quadratic Binary Unconstrained Optimization (QUBO) Problem*
- Contributed an understanding of the mathematics behind the equations describing an optical Ising machine by analyzing the gradient dynamical system associated to the QUBO problem. This work was primarily done using MATLAB, Pplane, and Python and focused on describing different characteristics of dynamical systems, such as separatrices and basins of attraction.

Research Experience for Undergraduates (REU) **Summer 2016**

Marquette University

- Project: *Validating a Computational Fluid Dynamic Model for Predicting Relative 'Cleanability' Of Reusable Medical Devices*
- Assisted a doctoral student with validating a mathematical model that detects biological waste build up in reusable surgical equipment. Received training on using MATLAB, various statistical tests, and working with/interpolating large data sets.

Research Assistant **Spring 2016**

Mathematics, Statistics and Computer Science Department, Marquette University

- Project: *Mathematical Argumentation in K-8*

- Explored the impact of preparation activities for pre-service teachers on their ability to design and implement K-8 mathematics instruction with a focus on mathematical reasoning and proof. Primary contribution to the project was preparing data for analyses, analyzing research data, proofreading/editing project related materials, and transcribing video or audio files.

Teaching Experience

Graduate Teaching Assistant/Associate August 2017 – Current

Mathematics, University of Tennessee

Classes: College Algebra, Business Calculus (instructor of record), and Calculus I (instructor of record).

Adjunct Faculty Summer 2017

Mathematics, Rock Valley College

Faculty instructor in department run tutorial center

Undergraduate Teaching Assistant/Student Grader August 2015 – May 2017

Mathematics, Statistics and Computer Science, Marquette University

Classes: Differential Equations and Calculus for the Biological Sciences.

Tutor

Marquette University

August 2015- May 2017

Rock Valley College

January 2015-August 2015

Subjects: math, biology, chemistry, English, theology, speech, history and philosophy.

Scholarships/Awards

MU Pere Marquette Scholarship August 2015 – May 2017

Marquette University

MU Transfer Competition Scholarship August 2015 – May 2017

Marquette University

Excellence in History May 2014

Rock Valley College

Poster Presentations

Society of Mathematical Biology Annual Meeting August 2020

Title: *Linking Immuno-Epidemiology Principles to Violence*

Affiliations/Memberships

- *Member*, Society for Industrial and Applied Mathematics (SIAM)
- *Member*, American Society for Mathematics (ASM)
- *Member*, Mathematical Association of America (MAA)
- *Member*, Association for Women in Mathematics (AWM)

- *Vice President* (May 2020-Current)/*Public Relations Officer* (August 2019-May 2020), Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS) Student Chapter

Skills

- MATLAB
- LaTeX
- Maple
- MS Office

Support

Current: SARIF Summer Graduate Research Assistantship Fund/Received: \$3600

Pending: None

Prior: None