

Kristen Savary

Curriculum Vitae

Education

- 2019–Present **Ph.D., Mathematical Sciences**, *Clemson University*, Clemson, SC.
Advisor: Prof. M. Wiecek
- 2017–2019 **M.S., Mathematical Sciences**, *Clemson University*, Clemson, SC.
Advisor: Prof. F. Manganiello
- 2014–2017 **B.S., Mathematical Sciences**, *Clemson University*, Clemson, SC.
Minor in Computer Science, Calhoun Honors College

Experience

Academic

- Fall 2020 – **Graduate Instructor of Record**, *School of Mathematical and Statistical Sciences*, CLEMSON UNIVERSITY, Clemson, SC.
Spring 2021
See ‘Teaching Experience’ Section for additional information.
- Summer 2019 **Clemson Research Training Group pREU Mentor**, *School of Mathematical and Statistical Sciences*, CLEMSON UNIVERSITY, Clemson, SC.
Mentored 5 rising sophomores and junior undergraduates on a summer research project relating to interference alignment over multiple unicast networks.
- 2018–Present **Mathematics Tutor**, *School of Mathematical and Statistical Sciences*, CLEMSON UNIVERSITY, Clemson, SC.
Tutored several students in Calculus I, Calculus II, Calculus III, and Linear Algebra.
- 2017–2018 **Graduate Teaching Assistant**, *School of Mathematical and Statistical Sciences*, CLEMSON UNIVERSITY, Clemson, SC.
Served as an in-class teaching assistant for Calculus of Several Variables (Spring 2018) and Business Calculus II (Fall 2017), as well as a grader for Graduate Data Analysis. Held office hours and graded student’s assignments, quizzes, and exams.

Internship

- May–August 2016 **Software Engineering Intern**, *CARTEGRAPH*, Dubuque, IA.
Contributed C# code to their Operations Management System Software. Retrieved data from client databases using SQL to identify product weaknesses
- May–August 2015 **Software Content Intern**, *HAWKES LEARNING*, Mt. Pleasant, SC.
Ensured accurate student web software by identifying software bugs in the Precalculus web product. Reviewed 10 chapters of Intermediate Algebra Instructional Videos.

Miscellaneous

2016–2017 **Computer Science Tutor**, *PEER/WISE PROGRAM*, Clemson University.

2014–2017 **Office Assistant**, *CALHOUN HONORS COLLEGE*, Clemson University.

Research

Current Interests

Operations research, particularly online multi-objective optimization. Currently working on a project related to online gradient descent and extending it to multiobjective problems with various definitions of regret.

Master's Project (2019)

Title *Interference Alignment over Finite Fields for Multiple Unicast Networks*

Advisor Assistant Professor Felice Manganiello

Description This project's goal is to find all solutions to an interference alignment scheme for sending different messages from 2 sources to corresponding terminals.

Departmental Honors Thesis (2017)

Title *Finding Minimal Separating Sets in a Graph*

Advisor Assistant Professor Felice Manganiello

Description This thesis explored the possible expansion of Menger's Theorem relating to the minimum cut in a graph.

Creative Inquiry (2015)

Title *Cryptography*

Advisors Professor Jim Brown and Assistant Professor Felice Manganiello

Description An introductory research course into cryptography.

EUREKA! (2014)

Title *Ada Lovelace*

Advisor Professor Emeritus Daniel Warner

Description EUREKA! is a summer research program for incoming honors freshman. This project focused on Ada Lovelace and the first "computer" program.

Selected Grants

2018–2022 **Women and Mathematics Ambassador**, *INSTITUTE OF ADVANCED STUDY*, Princeton, NJ.

Awarded this grant, funded by Charles and Lisa Simonyi, August 2018 by the IAS to build support for women in mathematics across the country. See Wikipedia Edit-A-Thon below.

2018–2020 **Coding Theory, Cryptography, and Number Theory Research Training Group**, *CLEMSON UNIVERSITY*, Clemson, SC.

Awarded this grant August 2018 by Clemson's research training group to relieve TA duties to focus on research.

NSF Grant no. 1547399 -NSF RTG: Coding Theory, Cryptography, and Number Theory.

Invited Talks and Panels

- October 2022 **Set-Based Regret for Multiobjective Optimization**, *INFORMS 2022 Annual Meeting*, Indianapolis, IN, Special Session on Multiobjective Optimization.
- February 2022 **Graduate Student Panelist**, *Truth Values Community Event Series*, Virtual Podcast.
- January 2018 **Graduate Student Panelist**, *National Conference for Undergraduate Women in Mathematics.*, University of Nebraska-Lincoln, Lincoln, NE.

Conferences and Workshops

Organized

- February 2022, 2023 **Math-For-All Clemson Satellite**, *Co-Organizer*, Clemson University.
Organized a conference to foster inclusivity in mathematics by holding talks and discussions in both math research and education.
- January 2019 **Wikipedia Edit-A-Thon**, *Co-Organizer*, Clemson University.
Organized an event to teach participants how to create and edit Wikipedia pages to increase the visibility of underrepresented minorities in the sciences.

Attended

- March 2022 **INFORMS Optimization Society Conference**, Greenville, SC.
- January 2020 **Joint Mathematics Meeting**, Denver, CO.
pREU students I mentored presented our work at an undergraduate session, titled "Solvability of Multiple Unicast Network".
- January 2019 **Joint Mathematics Meeting**, Baltimore, MD.
- May 2018 **Women and Mathematics: Mathematics of Modern Cryptography**, *Institute for Advanced Study*, Princeton, NJ.
- April 2018 **Code-Based Cryptography Workshop**, *Florida Atlantic University*, Ft. Lauderdale, FL.
- March 2018 **MAA Southeastern Section 2018 Meeting**, *Clemson University*, Clemson, SC.
- April 2017 **MAA Southeastern Section 2017 Meeting**, *Mercer Univerisity*, Macon, GA.

Teaching Experience

- Fall 2022 **Math 2070: Business Calculus II**, *taught in a flipped format*.
- Spring 2022 **Math 2070: Business Calculus II**, *taught a specialized section for Community for Undergraduate Business Students (CUBS)*.
- Fall 2021 **Math 1020: Business Calculus I**, *taught a specialized section for Community for Undergraduate Business Students (CUBS)*.
- Spring 2021 **Math 1010: Essential Mathematics for the Informed Society**, *taught online*.
- Fall 2020 **Math 1010: Essential Mathematics for the Informed Society**, *taught online*.

Service

- 2020–Present **School of Mathematical and Statistical Sciences Graduate Student Advisory Council**, *Representative (2022–Present)*, *Co-Chair (2020–2022)*, *Co-Founder*, Clemson University.
Created a group to discuss issues amongst graduate students in the School of Mathematical and Statistical Sciences.
- 2022–Present **College of Science Graduate Student Advisory Board**, *Member*, Clemson University.
A group of graduate students in communication with an associate dean of the College of Science.
- 2018–Present **Association for Women and Mathematics**, *Graduate Coordinator (2022–Present)*, *President (2019–2022)*, *Outreach Chair (2018–2019)*, Clemson University Chapter.
Coordinate outreach opportunities by bringing in speakers and prepare materials for events to promote the inclusion of women in mathematics.
- 2018–2021 **DINAMICS: Diversity, INclusivity, And MathematICAL Sciences**, *Co-Founder*, Clemson University.
Created a group to discuss issues of diversity and inclusivity in the School of Mathematical and Statistical Sciences.
- 2018–2022 **School of Mathematics and Statistical Sciences Intramural Sports**, *Organizer*, Clemson University.
Assembled teams of participants from the School to play a variety of intramural sports.
- March 2018 **MAA Southeastern Section 2018 Section Meeting**, *Volunteer*, Clemson, SC.
Helped prepare registration packets, set up presentation rooms, registered participants, chaired contributed paper session, and other tasks.

Honors

- 2019 Clemson University School of Mathematical and Statistical Sciences Outstanding Graduate Citizenship Award
- 2014, 2015 Clemson University President’s List
- 2016, 2017 Clemson University Dean’s List
- April 2015 Clemson Mathematical Sciences Department Freshman Award

Computer skills

- Proficient MATLAB, JAVA, L^AT_EX, C, C++, MAGMA, Linux, Microsoft Office
- Basic HTML, PYTHON, CSS, JAVASCRIPT, C#