LACEY JOHNSON

EDUCATION

University of Florida, Gainesville, FL
PhD in Mathematics, May 2019
Advisor: Kevin Knudson
Dissertation Title: Discrete Morse Theory on Loop Spaces

University of Florida, Gainesville, FL
M.S. in Mathematics, May 2016

James Madison University, Harrisonburg, VA
B.S. in Mathematics, May 2014
B.S. in Communication Studies – Concentration: Interpersonal Communications, May 2014

TEACHING EXPERIENCE

Instructor of Record

- MAC 2312: Analytic Geometry and Calculus II – Flipped Classroom **Summer 2018**
  - **Led a flipped classroom** by providing pre-recorded lectures to be viewed by the students outside of class. This freed up time to facilitate in-class activities, interactive modules, discussion, exercises, and other activities.
- MAC 2311: Analytic Geometry and Calculus I – Flipped Classroom **Fall 2017**
  - **Coordinated the entire course** by developing and organizing the logistics, lectured the classes, and took on the teaching assistant position for the course, as well.
- MAC 2312: Analytic Geometry and Calculus II **Summer 2017**
- MAC 1105: Basic College Algebra **Spring 2017**
  - **Managed responsibilities of teaching assistants**.
  - Led the online and hybrid sections.
  - Gained experience working with online programs, such as Canvas, MyMathLab, and ProctorU.
- MAC 1105: Basic College Algebra **Fall 2016**
  - **Offered services to support first-year students in their academic transition** from high school to college as part of the AIM Program at UF.
  - **Smaller class size** helped to enhance math and communication skills.
- MAC 2311: Analytic Geometry and Calculus I **Summer 2016**

Adjunct

- MAC 2311: Analytic Geometry and Calculus I - Online **Summer 2019 (expected)**

Lecturer

- MAC 1147: Precalculus, Algebra, and Trigonometry **Fall 2018**
  - **Lecturing a larger class size** of over 300 students.

Teaching Assistant

- MAC 2312: Analytic Geometry and Calculus II – Flipped Classroom **Spring 2019**
- MAC 2312: Analytic Geometry and Calculus II – Flipped Classroom **Spring 2018**
- MAC 2311: Analytic Geometry and Calculus I **Fall 2016**
- MAC 2311: Analytic Geometry and Calculus I **Spring 2016**
- MAC 2311: Analytic Geometry and Calculus I **Fall 2015**
- MAC 1105: Basic College Algebra **Spring 2015**
- MAC 1147: Precalculus, Algebra, and Trig **Fall 2014**

RESEARCH EXPERIENCE, PRESENTATIONS, AND PAPERS

UF/FSU Topology and Geometry Meeting (expected) **February 2019**
- Speaking on Discrete Morse Theory on Loop Spaces

Johnson, L. and Knudson, K. (2018). *Min-max theory for cell complexes*. Submitted paper, Department of Mathematics, University of Florida, Gainesville, United States.

Graduate Student Topology Seminar, University of Florida **Spring 2018**
- Discussed core concepts, theorems, and ideas from Morse Theory.

Graduate Student Topology Seminar, University of Florida **April 2016**
- Introduced concepts and examples of smooth and discrete Morse Theory that Dr. Knudson lays out in his book Morse Theory Smooth and Discrete

Joint Mathematics Meeting Presentation, Baltimore, Maryland **January 2014**
- Presented summer research on K-Potent Groebner Bases and Sudoku

SUMS Conference Presenter, James Madison University **Sept 2013**
- SUMS is the Shenandoah Undergraduate Mathematics and Statistics Conference
- Presented summer research on K-Potent Groebner Bases and Sudoku to professors, collegiate students, and high school students from all over the east coast

Undergraduate Research Assistant, James Madison University **Summer 2013**
- Research assistant alongside Associate Professor Elizabeth Arnold of James Madison University.
- Computed Groebner bases for a system of polynomials that represented the constraints of a smaller version of Sudoku, known as Shidoku. Tested different systems of polynomials in Maple to improve computation time.
- Presented research to President Alger of James Madison University, math faculty, and other summer research students

AWARDS

- **Neil White Excellence in Teaching Award**, University of Florida **May 2018**
- **Eleanor Ewing Ehrlich Award**, University of Florida **May 2017**
- **Mathematics Research Award**, James Madison University **April 2014**
- **First Place Research Poster Competition** **Sept 2013**
  Shenandoah Undergraduate Mathematics and Statistics Conference, James Madison University

LEADERSHIP EXPERIENCE

University Program Board, James Madison University **2011-2014**
- Enhanced the overall college experience by providing a variety of creative, educational, and entertaining programs that appeal to diverse audience. Applied creative and innovative thinking when brainstorming, planning, and promoting events. Coordinated staffing, activities, and logistics for events.

Association for Women in Mathematics, James Madison University Student Chapter **2012-2014**
- Founding member of the AWM JMU Student Chapter
- Networked with other math, science, and engineering students. Discussed famous female mathematicians throughout history.

First-Year Orientation Guide, James Madison University **2012-2013**
- Served as a role-model for incoming first-year students. Assisted with first-year student's academic, personal, and social transition into university life.

Make Your Mark on Madison Participant, James Madison University **Fall 2011**

- Focused on learning and discussing values, diversity, communication, and general leadership skills necessary for positive involvement on campus.