

Megan McGee

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EDUCATION

University of South Carolina, Columbia, SC

Doctor of Philosophy in Mathematics, Projected 2025

Concentration: Applied and Computational Mathematics

Millersville University of Pennsylvania, Millersville, PA

Bachelor of Science in Mathematics, December 2019

Minors: Computer Science, Spanish Culture

RELEVANT COURSE WORK

Graduate:

Analysis I, Applied Mathematics I, Variational Methods for PDEs and Model Reduction

Undergraduate:

Partial Differential Equations, Complex Analysis, Mathematical Modeling, Numerical Analysis, Abstract Algebra, Linear Algebra, Computer Architecture, Data Structures

TECHNICAL SKILLS

Microsoft Word, Microsoft Excel, LaTeX, Mathematica, Maple, Java, C++, HTML, MATLAB, FORTRAN, Zoom, BlackBoard Collaborate, ArcGIS

RESEARCH EXPERIENCE

“Demographic analysis of nesting bald eagles in New Jersey using mathematical models”

Millersville University Mathematics Departmental Honors Thesis, Millersville, PA

Advisor: Dr. Baoling Ma

November 2019

- Built mathematical and statistical models to analyze population growth
- Gained experience with interdisciplinary research by studying the life cycle of the bald eagle
- Performed a demographic analysis, including sensitivity analysis, on the bald eagle population

“Reconstruction of stratospheric ozone dynamics with MPAS and a high resolution transport model on a rotated sphere”

[AM]² Research Experience for Undergraduates, Arizona State University, Tempe, AZ

Advisor: Dr. Mohamed Moustaoi

May - July 2019

- Member of 3-student team tasked with studying the impact of the polar vortex on depleted ozone regions
- Modified the Model for Prediction Across Scales (MPAS) to include initial conditions for ozone and raised the top boundary to 40km
- Developed a high resolution Lagrangian transport model using geodesic coordinate transformations on a rotated sphere

PRESENTATIONS

“Study of the recovery of nesting bald eagle population in New Jersey by mathematical models”

- Mathematical Association of America: Eastern Pennsylvania and Delaware Section Conference
- DeSales University, Lehigh County, PA November 2019

“Study of the recovery of nesting bald eagle population in New Jersey by mathematical models”

- Pennsylvania State System of Higher Education Student STEM Conference
- Kutztown University, Kutztown, PA November 2019

“[AM]² Research Experience for Undergraduates”

- Millersville University and Franklin and Marshall College Joint Colloquium
- Millersville University, Millersville, PA November 2019

“Reconstruction of stratospheric ozone dynamics with MPAS and a high resolution transport model on a rotated sphere”

- [AM]² REU Final Presentation
- Arizona State University, Tempe, AZ July 2019

PROFESSIONAL EXPERIENCE

University of South Carolina, Columbia, SC

Graduate Instructional Assistant

- Lead recitation and lab classes for roughly 30 students in Calculus 1
- Graded quizzes, created assignments, developed lesson plans
- Worked closely with lead lecturer to convey information clearly and accurately

Millersville University Mathematics Assistance Center, Millersville, PA

Mathematics Tutor

August 2018 - December 2019

- Provided clear answers to questions presented by walk in students
- Assisted with subjects ranging from basic math through multivariable calculus
- Helped develop students’ understanding of difficult mathematical concepts both individually and in groups

Online

Private Mathematics Tutor

August 2018 - Present

- Designed lesson plans and examples for student in AP Calculus and Differential Equations
- Created and administered exams for student in Differential Equations

LEADERSHIP EXPERIENCE

Millersville University, Millersville, PA

- Ropes Course Lead Facilitator August 2018 - November 2019
- Campus Recreation Leadership Skills Program, Levels 1, 2 & 3 January 2018 - May 2019
- Captain, Millersville Equestrian Team August 2017 - May 2019

MEMBERSHIPS

Association for Women in Mathematics	2018 - Present
Mathematical Association of America	2018 - Present
The National Society of Leadership and Success	2017 - Present
National Society of Collegiate Scholars	2016 - Present