

Micah Henson

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EDUCATION

University of Washington, Seattle, WA
PhD in Applied Mathematics Expected June 2022
University of Washington, Seattle, WA
Master of Science in Applied Mathematics June 2019
Spelman College, Atlanta, GA
Bachelor of Science *summa cum laude* in Mathematics, Top Ten Graduate May 2017

SKILLS

- Proficient with: Matlab
- Competent using: Python, in particular, NumPy and PyTorch
- Familiar with: R, SQL
- Computational Methods: Numerical Linear Algebra, Applied Complex Analysis, Advanced Methods of Ordinary and Partial Differential Equations, Machine Learning, Boundary Value and Time Dependent Problems, Optimization, Optimal Control, Dynamical Systems

WORK EXPERIENCE

University of Washington, Seattle, WA June 2017-
Teaching Associate, Department of Applied Mathematics

- Hold twice weekly office hours and grade assignments for 60-80 students per quarter in a variety of applied math courses

Pre-Doctoral Instructor, UW STEM Upward Bound

- Co-Instructor for Machine Learning and Statistics
- Designed interactive lectures and activities to explain high level concepts to high school students

EDGE for Women, Virtual Mentor June 2020 - July 2020

- Led problem sessions and held office hours for women entering PhD programs in the mathematical sciences during the summer 2020 program
- Delivered weekly progress reports to program advisors

Spelman College, Atlanta, GA Jan 2015 - May 2017
Directed Supplementary Instructor, Mathematics and Physics

- Developed lesson plans and provided additional instruction for undergraduate students in physics and calculus

SELECTED PRESENTATIONS

The Sandpile Group of Thick Cycle Graphs. MAA Undergraduate Student Poster Session, Joint Math Meetings, Atlanta, GA, January 2017
The Sandpile Group of Thick Cycle Graphs. National Diversity in STEM Conference, SACNAS, Long Beach, CA, October 2016

SELECTED RESEARCH

University of Washington, Sept 2018-

- Using optimal control and differential game theory to maximize happiness in marriage
- Independently creating and implementing programs in Matlab that solve dynamical systems given parameters from data
- Compose quarterly progress reports for advisors

Mathematical Sciences Research Institute Undergraduate Program, June - July 2016

- Collaborated with other undergraduates to determine an explicit formula for a type of non-regular, multi-family graphs called thick cycle graphs
- Presented weekly progress reports to project advisors and Principal Investigator
- Composed and submitted paper for publication in a mathematics journal

University of Glasgow, May - July 2015

- Modeled the mechanics of heavy ropes and chains by studying the N -pendulum using Lagrangian mechanics
- Created and implemented programs in Matlab to produce simulations

AWARDS

- ARCS Fellow, 2017-2020
- Boeing Fellow, 2017-2018
- AMS EDGE Fellow, 2017
- Outstanding Poster in the MAA Student Poster Session, 2017

SERVICE AND LEADERSHIP

- UW AMath Diversity Committee member, 2019-2020
- WAMM Mentor for undergraduate women, 2019
- Treasurer of UW Chapter of SIAM, 2018-2019
- Founding Co-President, AWM Math Club Student Chapter, Spelman College, 2016-2017