

EDUCATION

Cornell University PhD Applied Mathematics	Ithaca, NY August 2024 - Current
Michigan State University BS Physics and Mathematics, Graduated With Honor Minor in Computational Mathematics, Science, and Engineering	East Lansing, MI September 2020 - April 2024

SELECTED HONORS AND AWARDS

Robert F. Smith Fellowship, Cornell University College of Engineering	2024
Thomas Osgood Award for Excellence in Academics and Research, MSU Physics	2024
Undergraduate LA Award, Upper-Level Course, MSU Physics	2024
McCartney Scholarship Award, MSU Mathematics	2023

PUBLICATIONS

Peer Reviewed Conference Papers

[1] **A. Valentine**, D. M. Gordon, and A. Bizyaeva, *Mixed-feedback oscillations in the foraging dynamics of arboreal turtle ants*, 2025. arXiv: 2504.11551 [q-bio.PE].

PRESENTATIONS

OURFA ² M ² 2026	February 2026
Conference on Decision and Control 2025	December 2025
Foundations of Adaptive Networks Working Group, Santa Fe Institute	May 2025

SELECTED SERVICE AND OUTREACH

- CAM coffee hour organizer September 2025- Current
- Science Theater demonstration maintenance lead April 2023 - May 2024
Science Theater is a science communication club that performs STEM demos for kids of all ages.
- Michigan State University Society of Physics Students Vice President April 2023 - April 2024
- Women and Minorities in the Physical Sciences Mentoring co-chair October 2022 - August 2023
- Chaperone of Physics of Atomic Nuclei (PAN) summer camp July 24-29, 2022, July 23-28, 2023
PAN is a free, week-long summer camp about nuclear astrophysics for high school students.

TEACHING

At Cornell:

- Math Explorations (MATH 1300) Spring 2026
In-Class Teaching Assistant
- Differential Equations for Engineers (MATH 2930) Fall 2025
Teaching Assistant

At Michigan State University:

- Machine Learning Short Course Summer 2024
Co-taught with Professor Danny Caballero
- Electricity and Magnetism I (PHY 481) Spring 2024
Learning Assistant, Teaching Fellowship
- Classical Mechanics (PHY 321) Spring 2024
Learning Assistant
- Mathematical Modeling in Physics (PHY 415) Fall 2023
Learning Assistant
- Machine Learning Short Course Summer 2023
Co-taught with Professor Danny Caballero
- Physics for Scientists and Engineers II (PHY 184) Spring 2023
Learning Assistant
- Physics for Scientists and Engineers II (PHY 184) Fall 2022
Curriculum Development
- Studio physics courses (PHY 173/PHY 174) Summer 2022
Curriculum Development
- Physics for Scientists and Engineers II (PHY 184) Spring 2022
Learning Assistant
- Physics for Scientists and Engineers I (PHY 183) Fall 2021
Learning Assistant
- Physics for Scientists and Engineers I (PHY 183) Spring 2021
Learning Assistant