# Alia Valentine

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## EDUCATION

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

## SELECTED HONORS AND AWARDS

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|---|---|
| Robert F. Smith Fellowship, Cornell University College of Engineering | 2024 |
| Thomas Osgood Award for Excellence in Academics and Research, MSU Physics | 2024 |
| Undergraduate Learning Assistant 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

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| 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*