

# 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 LA Award, Upper-Level Course, MSU Physics	2024
McCartney Scholarship Award, MSU Mathematics	2023

## PUBLICATIONS

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### 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 <sup>2</sup> M <sup>2</sup> 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

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- 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

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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*