

Alia Valentine

Phone: 989-534-6341
Email: valen176@msu.edu
Website: valentine-alia.github.io

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

RESEARCH EXPERIENCE

Summer of Undergraduate Applied Math Institute REU Carnegie Mellon University – Assessing the robustness of VBMC for extracting parameters in differential equations	Pittsburgh, PA June 2023 - July 2023
Research Assistant MSU Department of Physics and Astronomy's Physics Education Research Lab – Integrating Computation in Science across Michigan	East Lansing, MI October 2021 - July 2022
Research Assistant MSU Department of Physics and Astronomy's Facility for Rare Isotope Beams – Contributed to development of beam optimization code for the Separator for Capture Reactions	East Lansing, MI February 2022 - July 2022

TEACHING EXPERIENCE

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

Learning Assistant

- Physics for Scientists and Engineers I (PHY 183)

Spring 2021

Learning Assistant

HONORS AND AWARDS

- Robert F. Smith Fellowship August 2024
Cornell University College of Engineering
- Thomas Osgood Award for Excellence in Academics and Research April 2024
Michigan State University department of Physics and Astronomy
- Undergraduate LA Award, Upper-Level Course April 2024
Michigan State University department of Physics and Astronomy
- McCartney Scholarship Award April 2023
Michigan State University department of Mathematics
- Best Poster for *Assessing the Robustness of VBMC for Extracting Parameters in Differential Equations* NAM
Mathfest 2023

CONFERENCES ATTENDED

- Graduate Research Opportunities Workshop 2023 Durham, North Carolina
Duke University October 20-22, 2023
- 2023 SIAM Great Lakes Meeting East Lansing, MI
Michigan State University October 14, 2023

EXTRACURRICULAR ACTIVITIES

- 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.