Alia Valentine

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EDUCATION

Michigan State University

BS Mathematics and Physics

Fall 2020—Current

Minor in Computational Mathematics, Science, and Engineering (CMSE)

Research Experience

Summer of Undergraduate Applied Math Institute REU

Carnegie Mellon University

Pittsburgh, PA

Summer 2023

- Assessing the robustness of VBMC for extracting parameters in differential equations

Research Assistant East Lansing, MI

MSU Department of Physics and Astronomy's Physics Education Research Lab Fall 2021 - Summer 2022

- Integrating Computation in Science across Michigan

Research Assistant East Lansing, MI

MSU Department of Physics and Astronomy's Facility for Rare Isotope Beams

Spring 2022

- Contributed to development of beam optimization code for the Separator for Capture Reactions

TEACHING EXPERIENCE

• (upcoming) 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	
• Curriculum Development for Physics for Scientists and Engineers II (PHY 184)	Fall 2022
• Curriculum Development for studio physics classes (PHY 173/PHY 174)	Summer 2022
Improved accesibility of course materials	
• 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	

Conferences Attended

(Upcoming) 2024 Joint Mathematics Meetings (JMM 2024)

San Francisco, CA January 3-6, 2024

Graduate Research Opportunities Workshop 2023 Duke University Durham, North Carolina October 20-22, 2023

2023 SIAM Great Lakes Meeting Michigan State University East Lansing, MI October 14, 2023

EXTRACURRICULAR ACTIVITIES

• Michigan State University Society of Physics Students Vice President

Summer 2023–Current

- Science Theater demonstration maintenance coordinator Spring 2023—Current Science Theater is a science communication club that performs STEM demos for kids of all ages.
- Women and Minorities in the Physical Sciences Mentoring co-chair

Fall 2022–Summer 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.