Alia Valentine

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EDUCATION

Michigan State University

BS Mathematics and Physics

East Lansing, MI
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 - Summer 2022

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

TEACHING EXPERIENCE

• Electricity and Magnetism I (PHY 481) Learning Assistant, Teaching Fellowship	Spring 2024
• Classical Mechanics (PHY 321)	Spring 2024
Learning Assistant • 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) Learning Assistant	Fall 2021
• Physics for Scientists and Engineers I (PHY 183) Learning Assistant	Spring 2021

SELECTED AWARDS

• McCartney Scholarship Math Award

Spring 2023

• Best Poster for Assessing the Robustness of VBMC for Extracting Parameters in Differential Equations

NAM

Mathfest 2023

Conferences Attended

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

• Science Theater demonstration maintenance coordinator

Spring 2023–Current
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

Summer 2023-Current

• 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.