

Harry (Guizhong) Luo

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Education

University of Wisconsin- Madison

2022 - 2026

- **Bachelor of Science - APPLIED MATHEMATICS, ENGINEERING AND PHYSICS**
- Certificate (Minor): Integrated Liberal Studies
- Awards: Dean's List (3/3)
- GPA:3.96/4.0

Relevant Coursework:

Probability Theory | Classical Mechanics | Mathematical Analysis | Linear Algebra | Differential Equation | Signal Processing | Calculus

Work Experience

Center of Academic Excellence | College of Letters and Science | UW-Madison

Dec. 2023 - Present

Academic Mentor

- One-on-one tutoring with students in introductory physics classes
- Prepare weekly study sessions with selected problems and weekly check-ins
- Personalize explanations on physics problems and topics based on individual study profiles

The Leonard R. Ingersoll Physics Museum | Chamberlain Hall | UW-Madison

Sept 2023 - Present

Museum Docent

- Conducting regular presentations on topics spanning mechanics, electromagnetism, cosmology, and modern physics to diverse audiences from the Greater Madison Community
- Actively participating in the planning and execution of physics outreach programs
- Collaborating with physics outreach staff to ensure the functionality and effectiveness of museum demonstrations

Nanjing Medical University | Nanjing, China

System Developer

May 2023 - present

- Leading a multidisciplinary team of accredited clinicians and professors to develop a Case-Based Retrieval Clinical Decision Support System (CDSS); academic paper in progress
- Conducting comprehensive analyses of international commercial products and scholarly articles on existing Clinical Decision Support Systems (CDSS)
- Designing and deploying an active-recurrent retrieval model specifically tailored for case-based diagnostics

Union South Kiosk | Union South, Madison, WI

Student Hourly Assistant

Jan 2023 - Apr 2023

- Collaborating and assisting with meal delivery, food preparation, dishwashing, and logistic arrangements in a cafeteria setting

Projects

Lampreys: The Bachelorettes of Lake Michigan

Feb 2024

Group project for *COMAP's Mathematical Contest in Modeling*

- Collaborated on a team to model the food web of Lake Michigan with a focus on the population dynamics of invasive sea lampreys
- Innovated beyond traditional models by developing a demographic projection matrix to simulate lamprey population cycles and food-dependent sex ratios, enhancing the Lotka-Volterra Model.
- Honed skills in teamwork, scientific communication, and simulation development, applying dynamics systems, matrix algebra and numerical analysis concepts to real-world ecological problems.

Leadership& Involvement

Badger Solar Racing | Madison, WI

Race Strategy and Simulation Analyst

Jan 2024 - present

- Collaborated within a dedicated team to enhance the performance of a solar racing car in *American Solar Challenge 2024*
- Utilized Matlab and Simulink for dynamic simulation and optimization of the car's dynamics, focusing on efficiency and reliability.
- Employed Python for data integration and analysis

Wisconsin International Student Association | UW-Madison

Board Member and Event Coordinator

Sept 2023 - Present

- Engaging in the recruiting, decision-making and brainstorming process of student organization management
- Planning and facilitating series of events focused on community-building and culture exchanging for international students
- Served as the club photographer

Skills

- Technical: Matlab, Simulink, \LaTeX , Python, Mathematica
- Software: ChatGPT, Rhino, Photoshop, Lightroom
- Languages: English (Proficient), Chinese (Native)