

Jared Ian Maller

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EDUCATION

The University of Georgia (UGA)

PhD in Physics

Athens, Georgia

May 2029

The University of Georgia (UGA)

Bachelor of Science (BS) in Astrophysics

Athens, Georgia

May 2024

RESEARCH EXPERIENCE

Department of Physics and Astronomy, UGA

Advisor: Dr. Cassandra Hall

Dec. 2024 - Present

- Investigation of protoplanetary disc properties through a Smooth Particle Hydrodynamics and Magnetohydrodynamics code (PHANTOM).
- Developed Skills: Linux, Python, Fortran, Smooth Particle Hydrodynamics (SPH), High Performance Computing

Department of Physics and Astronomy, UGA

Advisor: Dr. Craig Wiegert

Sep. 2022 - Present

- Investigation of upper-level physics students' understanding of the Taylor series approximation in a physical context through a resources framework.
- Developed skills: completing a literature review, working with an institutional review board, consent form development, and physics problem creation.

Department of Physics and Astronomy, UGA

Advisor: Dr. Nicholas Young

Oct. 2024 - Dec. 2024

- Investigation of the effect of Complex Multiple-Choice questions on creating inequities in physics education.
- Developed Skills: Data Analysis, Python

SELECTED PUBLICATIONS / PRESENTATIONS

Maller, J. Wiegert, C. (2023, April 4). *Physics Students Use of Taylor Series*. [Presentation]. CURO Research Symposium, Athens, Georgia, United States.

TEACHING EXPERIENCE

Graduate Lab Assistant, Department of Physics and Astronomy, UGA

PHYS1252 – Intro Studio Physics for Engineers II

Fall 2024

PHYS 1112 – Intro Physics Electricity Lab

Spring 2025

PHYS 1212 – Principles of Physics for Scientists and Engineers

Spring, Summer 2025

OTHER EXPERIENCE

Creating Opportunities for Students through Mentorship, Outreach, and Support (COSMOS), UGA

Peer Mentor

January 2025 - present

- Mentor to undergraduate student to support academic success and community integration.
- Provide guidance on course selection, research opportunities, and campus resources.

University of Georgia Housing Department

Materials Handler

July 2021 - August 2024

- Responsible for the loading, unloading, and transporting materials weighing up to 1600lbs.
- Accountable for over \$300,000 worth of product across multiple locations.
- Developed skills in teamwork, logistics, materials handling, and communication.

Outdoor Adventure Club, UGA

President, Trip Planner

August 2021 - May 2024

- Responsible for planning multi-day long outdoor activity trips for a club with 400+ members.

- Participated in service events such as trail clean ups.
- Hosted multiple educational stargazing nights.

Physics Club, UGA

Secretary, Vice President

August 2023 - May 2024

- Launched physics freshman outreach initiative to connect freshman with resources and information pertinent to a physics student.
- Planned, coordinated, and presented at various meetings with (astro)physics guest speakers, research opportunities, homework help, and other opportunities for (astro)physics majors and minors.

HONORS AND AWARDS

Spark Undergraduate Research Award

2023

Dean's List

2020, 2023, 2024

SKILLS

Programming & Tools: Python, Fortran, Linux, VSCode, SLURM

Libraries: Numpy, Matplotlib, Astropy

Astrophysics Tools: PHANTOM, MCFOST, Splash, Sarracen

Other: Adobe Photoshop

SERVICE PROJECTS

Georgia Junior Science and Humanities Symposium, *Paper Judge*

January 2025

UGA Center for Undergraduate Research Opportunities Symposium, *Event Staff*

April 2025

STEM Night at Barnett Shoals Elementary School, *Presenter*

February 2024

UGA Department of Physics and Astronomy, *Marketing*

September 2023

Milton Theatre Company, *Carpenter*

August 2023 - Present

Mountain View Theatre Company, *Carpenter, Acting Coach*

May 2020 - August 2023

CERTIFICATIONS/TRAINING

Social and Behavioral Research Training, *UGA*

December 2022

Linux Basics and Sapelo2 (Linux Cluster) Training, UGA

January 2025

Installing Software Packages in Virtual Environments on the Sapelo2 Cluster

February 2025

Job Parallelization with GNU Parallel and Slurm Arrays

April 2025