

Iago Mendes

Computational Physicist

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Education

Bachelor's Degree, Oberlin College

Physics & Computer Science Double Major

Spring 2021 – Fall 2024

- Overall GPA: **4.01** / 4.00. Major GPA: **4.03** / 4.00.
- STRONG (Science and Technology Research Opportunities for a New Generation) Scholar
- John F. Oberlin Scholarship Recipient
- Relevant Coursework:

Modern Physics

Waves & Optics

Computational Physics (**Python**)

Classical Mechanics

Quantum Mechanics

Electromagnetism & Thermodynamics

Astrophysics: Stars & Planets

Algorithms

Systems Programming (**C**)

Data Structures (**Java**)

Theory of Computation

Computer Architecture (**Assembly**)

Research

Isometric Embedding of Black Hole Horizons in Euclidean Space

Robert Owen's Lab, Oberlin College & SXS Collaboration

Fall 2021 – Present

- Implemented method in a **finite-difference code** (bit.ly/FDEmbed) & in the **Spectral Einstein Code**.
- Ran and studied binary black hole merger **simulations** in a high-performance **supercomputer**.
- **Publications**: in-progress paper in which I am the **first author** that will be published within 2 months.
- **Conference presentations**: **APS April Meeting** (2023, 2024) & **Oberlin's Symposium** (2022, 2023).
- Invited for Oberlin's Physics **Honors Program** and selected as an Oberlin's **Featured Researcher**.

Work Experience

Oberlin College – Oberlin, OH

Resident Assistant, Underrepresented in STEM House

Fall 2021 – Present

Teaching Assistant

Fall 2022 – Present

- Courses: Mechanics & Relativity, Electromagnetism & Thermo., and Programming Abstractions.

Google – Bay Area, CA

Software Engineer Intern, Wear OS

Summer 2023

- Used **Java** and **C++** to develop features on the **Android** operating system for smartwatches.
- Collaborated with my team and others, including managers, input engineers, and UX designers.

Training Software Engineer Intern, Google Assistant

Summer 2022

- Used **Angular** (**TypeScript**) to create reusable components for Google's issue-tracking platform.
- Completed entire development process: design doc, implementation, documentation, and launch.

Awards

Intl. Astronomy & Astrophysics Competition

- **Gold Honor** for being in the **top 5%** (2021, 2023).
- **Silver Honor** for being in the **top 10%** (2020).
- Ambassador Award for **recruiting** students (2020).

International Youth Math Challenge

- **Silver Honor** for being in the **top 10%** (2021).
- **Bronze Honor** for being in the **top 20%** (2020).

Intl. Astronomical Search Collaboration

- Provisional Discovery of an **Asteroid** (2021).

Projects & Leadership

Star View

starview.one

- Developed app & website for stargazing conditions.
- **10k+** installs & **1k+** active users on Google Play.

Hyperbolic Spectral Solver

bit.ly/HySpec

- Solved hyperbolic eqns. with **spectral methods**.

Astronomical Olympic League

- Materials to prepare for Astronomy competitions.

Regional Astronomical Studies Center

- Lectures in public schools, eclipse observations, etc.