WILLIAM WU
Berkeley, California | (631) 678 - 8621 | wuyongxuan@berkeley.edu

EDUCATION

University of California, Berkeley, CA
Bachelor of Arts in Astrophysics and Computer Science — Expected Spring 2026
GPA 3.860

RESEARCH EXPERIENCE

***Research Assistant,* Advisor–Yuhan Yao, University of California, Berkeley** — 2025 - present
Reducing and analyzing UV/optical photometry and spectral data for tidal disruption event AT2021gje to determine its standing in the broader TDE population

***Research Assistant,* Advisor – Carmine Cella, Center for New Music and Audio Technologies**
Worked on machine learning methods to infer parameters given an input sound for use with physical modeling synthesis — 2025 - present

***Research Assistant,* Advisor–Raffaella Margutti, University of California, Berkeley** — 2024 - present
Using X-ray telescopes such as SWIFT to image tidal disruption events. Reducing data and analyzing light curves and spectra to fit for physical information during the X ray plateau, monitor late time evolution, and search for quasi periodic eruptions.

***Research Assistant*, Advisor–Greg Aldering, Lawrence Berkeley National Lab** — 2024 – present
Working on imaging data from the SuperNova Integral Field Spectrograph (SNIFS) to assess dimming due to clouds or hardware issues, and to assess the seeing.Using PanSTARRS and GAIA to spatially align the images and obtain the image zeropoints.

***Research Assistant,* Advisor–Alex Filippenko, University of California, Berkeley** — 2024 - present
Observing with the Nickel 1m telescope at Lick Observatory and scanning supernovae candidates from Zwicky Transient Facility data

PUBLICATIONS

Kate Alexander, et al. (include **William Wu**) "The Multi-Wavelength Context of Delayed Radio Emission in TDEs: Evidence for Accretion-Driven Outflows", In Prep

WeiKang Zheng, Luc Dessart, Alexei V. Filippenko, et al. (include **William Wu**) "SN 2023ixf in the Pinwheel Galaxy M101: From Shock Breakout to the Nebular Phase", *The Astrophysical Journal* (2025)

POSTERS

William Wu. *X-Ray Observations of Tidal Disruption Events (TDEs)*, Spring 2025 BPURS Poster Session

PROJECTS AND INTERNSHIPS

While (Unknown) — 2025
Collaborated on a creative project exploring NASA roles during RIF challenges, contributing to narrative development, composing and producing original music, and building an interactive React.js webcomic viewer to enhance storytelling.

METALSTIGMATISM — 2025
Created a GPU-based direct and global illumination path tracer using Metal that simulates vision aberrations using clinical eye parameters for real-time display in the Apple vision pro

Physics Based Path Tracer — 2025
Created a direct and global illumination path tracer in C++ including Monte-Carlo estimation, Bounding Volume Hierarchies, Russian Roulette, and Adaptive Sampling

To the Sun Carillon Performance 2025
Developed server backend for time synchronization and front-end interactive web app for an interactive carillon concert sonifying Parker Solar Probe data. The concert has visited 5+ venues, each with 50+ audience members.

Electric Avenue 2024
Developed a pedagogical web app to teach basic network thinking

TEACHING EXPERIENCE

University of California Berkeley
Undergraduate Student Instructor – Physics 8A Spring 2025
Undergraduate Student Instructor – Astron C10 Fall 2024
Undergraduate Student Instructor – Astron 7AB Summer 2024

School Nova
Teaching Assistant – Math 7a, 7b 2020-2021

OUTREACH AND VOLUNTEERING

2025 ACM SIGGRAPH – Assisted in organizing and managing conference sessions, workshops, and panel discussions as a student volunteer
AAS 245 – Assisted in organizing and managing conference sessions, supported registration, and provided support for oral sessions as a volunteer
Various STEM Fairs – Performed astronomy demos for 400+ children at each science fair
UAS Star Parties – Operated various telescopes for outreach events for 50+ students
Astro Night – Operated the Richard Treffers telescope for public outreach events with 50+ people

EXTRACURRICULAR ACTIVITIES

Port Jefferson, NY
Development Team Lead - PJ Current (local student run newspaper) 2019 – 2022

University of California, Berkeley
Member – Golden Records RSO 2024 - present
Member – 3D Modeling and Animation RSO 2024 – present
Member – Cal Wushu 2024 – 2024
Telescope Crew – Undergraduate Astronomy Society RSO 2023 – present
Member – Outlet RSO 2022 - 2024
Member – Dance Games @ Berkeley RSO 2022 – present

OTHER SKILLS

Programming languages: Java, C, RISC-V, x86, C#, python, HTML, CSS, JavaScript, Scheme, SQL, C++, GLSL, and Golang
Libraries: NumPy, SciPy, AstroPy, matplotlib, pandas, emcee, React.js, p5.js, Node.js
Software: Autodesk Maya, Blender, Cubase, Unity, Godot, Unreal Engine