

# Karina Barboza

The Ohio State University  
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## EDUCATION

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EXPECTED 2027	Ph.D in ASTRONOMY, <b>The Ohio State University</b>
JULY 2024	M.S. in ASTRONOMY, <b>The Ohio State University</b>
JUNE 2021	B.S. in ASTROPHYSICS, <b>University of California</b> , Los Angeles

## SCHOLARSHIPS & GRANTS

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MAY 2024	AUI/IAU/Heising-Simons Scholar Travel Grant
APRIL 2024	NSF Graduate Student Research Fellowship
AUG 2022	Heising-Simons Foundation Bridge Fellowship
OCT 2018	UCLA Hermanas Unidas Poder de la Mujer Scholarship

## RESEARCH EXPERIENCE

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### **The Ohio State University**

*Advisors:* Laura Lopez, Adam Leroy, Smita Mathur **2024-Present**

- Investigating 8 star-forming galaxies using archival Chandra data to map their diffuse hot gas and XRB emission to determine the role and conditions of stellar feedback in shaping galaxies.

*Advisor:* Christopher Kochanek

**2022-2024**

- Searched for unbound triple systems created in galactic supernova explosions to constrain the role of higher order systems in massive stellar evolution and compact object formation.

### **California Institute of Technology**

**2022**

*Advisor:* David Cook

- Increased the efficiency of finding electromagnetic counterparts of gravitational waves by improving the completeness of known galaxies.

### **University of Hawaii at Manoa**

**2020 - 2021**

*Advisor:* Andreea Petric

- Investigated the morphology and kinematics of a triple AGN merger using SITELLE data.
- Analyzed the morphological features present in the merger, velocity of gas expulsion, and effects on the interstellar medium.

### **University of California, Los Angeles**

**2019 - 2020**

*Advisors:* Brad Hansen, Jon Zink

- Helped develop open-source pipeline ExoMult to identify binary systems.
- Using the Shane Telescope, binary targets were identified and gathered data has been implemented in furthering the software's development.

## TECHNICAL SKILLS

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**Languages:** Fluent in English, Spanish

**Coding Languages:** C++, Python, SQL, L<sup>A</sup>T<sub>E</sub>X

**OS:** Linux Ubuntu, MacOS, Windows 10

## WORK EXPERIENCE

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Nov 2021 - AUG 2022	<b>Infrared Processing and Analysis Center, Caltech</b> <i>Data Pipeline Operator for NEOWISE mission where I helped discover, track, and characterize near-Earth asteroids and comets, particularly those posing a threat to Earth.</i>
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DEC 2020 - JUN 2021	<b>Computing and Lab Revision Subcommittee, UCLA</b> <i>Revised the computing and laboratory instruction for the undergraduate physics curriculum.</i>
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## PUBLICATIONS

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**Karina Barboza** and Christopher Kochanek, 2024,[arXiv:2404.06540](https://arxiv.org/abs/2404.06540), “Searching for Triple Systems Unbound by Supernovae”

## CONFERENCES/TALKS/POSTERS

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*XXXII IAU General Assembly*, POSTER  
Cape Town, August 2024

*PHANGS Team Meeting*, TALK  
Munich, February 2024

*The 243rd Meeting of the American Astronomical Society*, POSTER  
New Orleans, January 2024

*National Society of Black Physicists*, CONFERENCE  
Knoxville, November 2023

*The 20th Divisional Meeting of the High Energy Astrophysics Division*, POSTER  
Hilton Waikoloa Village, March 2023

*SACNAS National Diversity in STEM*, CONFERENCE  
San Juan, October 2022

*Stanford Physics, Identity, and Equity Program*, CONFERENCE  
Stanford University, October 2021

*The 237th Meeting of the American Astronomical Society*, TALK  
Virtual, January 2021

*AstroBash*, TALK  
University of California Los Angeles, November 2020

*FUTURE of Physics 2020*, CONFERENCE  
Caltech, September 2020

*Morphology and Kinematics of a Triple AGN Merger*, TALK, POSTER  
University of Hawaii at Manoa, July 2020

## WORKSHOPS & SCHOOLS

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*La Serena School for Data Science: Applied Tools for Data Driven Science*, Winter School  
Chile, August 2024

*High Resolution X-Ray Spectroscopy Workshop*, Workshop  
MIT, August 2023

## OUTREACH

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JAN 2024	Graduate Program Recruitment at the 243rd AAS, VOLUNTEER
AUG 2023 - PRESENT	Scientific Thinkers, VOLUNTEER
JUN 2023 - AUG 2023	UCLA Planetarium Show Presenter, VOLUNTEER
JUL 2023 - AUG 2023	RISE Tutor, VOLUNTEER
JUN 2023 - AUG 2023	Caltech Astronomy Stargazing Lecture Series VOLUNTEER
APR 2023 - PRESENT	Spanish Planetarium Show Presenter, VOLUNTEER
JAN 2023 - PRESENT	AstroLatinX, MEMBER
AUG 2020 - JUN 2021	Letters to a Pre-Scientist, VOLUNTEER
OCT 2019 - NOV 2020	Exploring Your Universe, VOLUNTEER

## MEMBERSHIP

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American Astronomical Society (AAS)  
American Association for the Advancement of Science (AAAS)  
American Physical Society (APS)  
League of Underrepresented Minoritized Astronomers (LUMA)  
National Society of Black Physicists (NSBP)  
Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS)