

Abhishek V. Joshi

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EDUCATION

PhD, Physics, University of Illinois Urbana-Champaign 2019–
Advisor: Professor Charles Gammie
BS, Engineering Physics, University of Illinois Urbana-Champaign 2019
Summa Cum Laude GPA:3.83/4.0
Study abroad, University of Illinois at Urbana-Champaign Fall 2017–2018
Advisor: Professor Charles Gammie

PUBLICATIONS

Lists: NASA ADS, Google Scholar, ORCID.

1. **Joshi, A. V.**, Prather, B. S., Chan, C., Wielgus, M., et al. 2024, ApJ, 972, 135
Circular Polarization of Simulated Images of Black Holes
2. Event Horizon Telescope Collaboration, , Akiyama, K., Alberdi, A., et al., incl. **Joshi, A. V.** 2024, ApJL, 964, L26
First Sagittarius A Event Horizon Telescope Results. VIII. Physical Interpretation of the Polarized Ring*
3. Event Horizon Telescope Collaboration, , Akiyama, K., Alberdi, A., et al., incl. **Joshi, A. V.** 2023, ApJL, 957, L20
First M87 Event Horizon Telescope Results. IX. Detection of Near-horizon Circular Polarization
4. Conroy, N. S., Bauböck, M., Dhruv, V., et al., incl. **Joshi, A. V.** 2023, ApJ, 951, 46
Rotation in Event Horizon Telescope Movies
5. **Joshi, A. V.**, Rosofsky, S. G., Haas, R., & Huerta, E. A. 2023, PhRvD, 107, 064038
Numerical relativity higher order gravitational waveforms of eccentric, spinning, non-precessing binary black hole mergers
6. Event Horizon Telescope Collaboration, , Akiyama, K., Alberdi, A., et al., incl. **Joshi, A. V.** 2022, ApJL, 930, L16
First Sagittarius A Event Horizon Telescope Results. V. Testing Astrophysical Models of the Galactic Center Black Hole*
7. Event Horizon Telescope Collaboration, , Akiyama, K., Alberdi, A., et al., incl. **Joshi, A. V.** 2022, ApJL, 930, L12
First Sagittarius A Event Horizon Telescope Results. I. The Shadow of the Supermassive Black Hole in the Center of the Milky Way*
8. Wong, G. N., Prather, B. S., Dhruv, V., et al., incl. **Joshi, A. V.** 2022, ApJS, 259, 64
PATOKA: Simulating Electromagnetic Observables of Black Hole Accretion

9. Marszewski, A., Prather, B. S., **Joshi, A. V.**, Pandya, A., et al. 2021, ApJ, 921, 17
Updated Transfer Coefficients for Magnetized Plasmas
10. Pandya, A., Chandra, M., **Joshi, A. V.**, & Gammie, C. F. 2018, ApJ, 868, 13
Numerical Evaluation of the Relativistic Magnetized Plasma Susceptibility Tensor and Faraday Rotation Coefficients

AWARDS

Future Investigators in NASA Earth and Space Science and Technology NASA	2022–2025
Doctoral Fellowship University of California Institute for Mexico and the United States	2020–2025
Raynor L. Duncombe Student Research Prize Division on Dynamical Astronomy, American Astronomical Society	2023
Frontera Computational Science Fellowship Texas Advanced Computing Center, The University of Texas at Austin	2022–2023
Regents Fellowship UC Santa Cruz	2019

TALKS

Meeting of the American Physical Society	April 2024
54th meeting of the AAS Division on Dynamical Astronomy	May 2023
Texas Advanced Computing Center, The University of Texas at Austin	May 2023
Exoplanet Systems and Stellar Life Cycles, Aspen Center of Physics	Mar 2023
Friday Lunch Time Astrophysics Seminar (FLASH), UC Santa Cruz	Dec 2022
Seminar in Geophysical and Astrophysical Fluid Dynamics, UC Santa Cruz	Nov 2022
Exoplanet Summer Program, Other Worlds Laboratory	July 2022
Texas Advanced Computing Center, The University of Texas at Austin	July 2022
240th meeting of the American Astronomical Society	June 2022

SERVICE

Chair for session on neutron stars and stellar objects, meeting of the APS	April 2024
Referee for <i>Astronomy & Astrophysics</i>	
Executive Secretary, NASA Astrophysics Theory Program review panel	Oct 2023
Designed and led workshops: <i>Analyzing volumetric data using the yt package</i> , Lamat program	June 2023
<i>Stellar evolution using Gaia</i> , University of Guadalajara	Mar 2022

MENTORING

Lamat program:

- Brooke Kotten, undergraduate at the University of Wisconsin, Madison 2023
- Richard Truong, undergraduate at San Francisco State University 2023
- Valeriia Rohoza, undergraduate at Northwestern 2022
- Alejandra Meza, high school senior at Pacific Collegiate School 2022
Now physics undergraduate at UC Berkeley
- Alejandra Roselli-Calderon, MS student at Brown University 2021
Now astronomy and astrophysics PhD student at UC Santa Cruz

Society of Physics Students Mentoring Program 2021

Young Scholars Program: Derek Davis, junior at Urbana High School Summer 2018

OUTREACH

Volunteer, *Climate Justice Leaders: Voices from the Pajaro Valley* Oct 2023

Panelist, Society of Physics Students undergrad-grad meet and greet Nov 2021

Volunteer, University of Illinois Astronomical Observatory open house Fall 2017

TEACHING

Teaching assistant, UC Santa Cruz:

Astronomy 118: *Physics of planetary systems* Spring 2022

Taught one lecture; wrote and gave final exam

Astronomy 116: *Physics of stars* Spring 2021

Astronomy 119: *Introduction to scientific computing* Fall 2020

Astronomy 16: *Astrobiology: life in the universe* Spring 2020

Astronomy 6: *The space-age solar system* Winter 2020

PRESS

Discovery Alert: Earth-sized Planet Has a ‘Lava Hemisphere’ Jan 2024
Chelsea Gohd, NASA

The Juicy Secrets of Stars That Eat Their Planets Aug 2022
Becky Ferreira, The New York Times

Astronomers Reveal New Details of How Stars Devour Planets Aug 2022
Nola Taylor Tillman, Scientific American