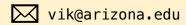
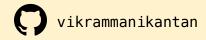
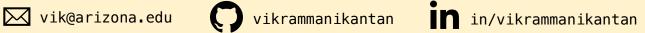
Vikram Manikantan







Education_____

May 2027 Ph.D., Astronomy & Astrophysics

University of Arizona GPA: 4.0/4.0

Jun 2022 B.A., Physics w/ Honors + Computer Science Minor Northwestern University GPA: 3.8/4.0

Research_Projects____

Jan 2023 Multi-Messenger Eccentric Binary BH Mergers (with Einstein Toolkit) - present

- o Running numerical relativity and magnetohydrodynamic simulations to understand the evolution of an eccentric binary black hole system.
- Studying multi-messenger signals (gravitational waves and electromagnetic) to provide qualitative differences from circular mergers.

Oct 2022 Initial Accretion Disk Solutions and Their Effect on Simulation - present Evolution (with Athena++ GRMHD Simulations)

- Developed in-house analysis tools to study Athena++ simulation data sets.
- o Implemented two additional accretion disk torus solutions (Penna+ 2013; Chakrabarti 1985;) into Athena++ code.

Jul 2020 Magnetized Winds as a Dominant Mode of Angular Momentum Transport[^] - Feb 2023 (with H-AMR GRMHD Simulations)

- Won department-wide outstanding thesis research project <u>Department</u> Page: Press Release.
- Developed novel python analysis code to study multiple angular momentum transport modes within magnetically arrested accretion disks.
- Designed a new, consistent method to define disk/wind boundaries in magnetically driven accretion regimes.

Employment

Aug 2022 Astrophysics Graduate Research Assistant University of Arizona - present Advisor: Prof. Vasilis Paschalidis Tucson, AZ Jun 2019 Computational Astrophysics Researcher Northwestern University Jul 2022 Advisor: Prof. Sasha Tchekhovskoy Evanston, IL Jun 2021 Solutions Engineering Summer Intern Deloitte Consulting Aug 2021 Chicago, IL

[^] Manuscript available upon request

1. Manikantan et al. 2023, Magnetized Winds as the Dominant Mode of Angular Momentum Transport in Magnetically Arrested Disks (in prep)

Grants_____

Feb 2023	Theoretical Astrophysics Program Travel Grant Announcement .	\$1000
Jun 2020	Summer Undergraduate Research Grant	\$3500
Jun 2019	Undergraduate Research Assistantship Program	\$3500

Presentations

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May 2022	UChicago High-Energy Journal Club	Talk

Poster

Jan 2022 237th American Astronomical Society Meeting Poster (Cancelled)

Meetings

Jul 2023 Code/Astro Workshop at Northwestern University

Jun 2022 Annual European Astronomical Society Meeting (EAS)

Teaching/Mentoring_____

Jan 2022	Senior Student Mentor in the Society of Physics Students and
- Jun 2022	We're in Physics mentorship program

Jan 2022 Undergraduate Grader for physics 140-2 and 140-3 (introductory

Jun 2022 honors physics for majors)

Awards_____

AY 2021	Outstanding Undergraduate Thesis	Research in	Northwestern University
- 2022	the Physics and Astronomy Department	nent	Evanston, IL

<u>Department Page</u>; <u>Press Release</u>

References_____

1.	Prof. Vasilis Paschalidis	University of Arizona
3.	Prof. Sasha Tchekhovskoy	Northwestern University
5.	Prof. Jens Koch	Northwestern University

^{*} Contact information available upon request