



Education

- May 2027 **Ph.D., M.S., Astronomy & Astrophysics** University of Arizona
+ Member of Theoretical Astrophysics Program (TAP) [\[link\]](#) GPA: 4.0/4.0
- Jun 2022 **B.A., Physics w/ Honors (+ Computer Science Minor)** Northwestern University
+ Outstanding Undergraduate Thesis Research in the Physics and Astronomy Department [\[Department Record\]](#); [Press Release](#) GPA: 3.8/4.0
+ Davis United World Scholar [\[link\]](#)

Experience

- Aug 2022 **Astrophysics Graduate Research Assistant** University of Arizona
– present Advisor: Prof. Vasilis Paschalidis Tucson, AZ
+ Running and debugging first ever general relativistic, magnetohydrodynamic (GRMHD) simulations of eccentric, accreting black hole binaries on remote supercomputers
+ Independently developing new initial data solutions in C++ for Athena++, a large-scale GRMHD code
+ Designing efficient analysis code to be submitted on remote servers and supercomputers such as *Oak Ridge National Laboratory* and *Texas Advanced Computing Center*
- Jun 2019 **Computational Astrophysics Researcher** Northwestern University
– Jul 2022 Advisor: Prof. Sasha Tchekhovskoy Evanston, IL
+ 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.
+ Writing first-author publication to be submitted to the *Astrophysics Journal* (ApJ) in August 2023
- Jun 2021 **Solutions Engineering Summer Analyst** Deloitte Consulting
– Aug 2021 Chicago, IL
+ Received full-time return offer to be an analyst in the Chicago office
+ Leading client workshops to develop scalable and efficient solutions to accommodate new revenue recognition business rules
+ Designing and developing process flows and functional specifications to guide database developers

Mentoring

- Aug 2023 **TIMESTEP Research Apprenticeship** UA Department of Astronomy
– May 2024 Graduate Coordinator Tucson, AZ
+ Mentor a team of 5 undergraduate student interns on technical skills and research preparedness
+ Provide guidance on non-technical skills used in team settings – communication, teamwork, and leadership
+ Coordinate bi-weekly 1:1 meetings with interns, weekly group meetings, and solicit feedback on the program
- Aug 2023 **COMPASS Workshop** [\[github\]](#) UA Department of Astronomy
Co-organizer and Instructor Tucson, AZ
+ Developing core curriculum to cover computational basics for astrophysics research
+ Designing lessons and Jupyter notebook tutorials for Python, Numpy, Matplotlib, and debugging basics
- Apr 2022 **SPS/WiP Mentorship Program** NU Department of Physics
Senior Mentor Evanston, IL
+ Provided academic and professional guidance to four students, two of which were entering industry internships as physics majors
+ Coordinated individual mentor/mentee check-ins and larger mentor group meetings

Publication(s)

1. **Manikantan et al. 2023**, Equipartition of Winds and Turbulence as Angular Momentum Transport Processes in Magnetically Arrested Accretion Disks (in prep)

Grants

Feb 2023	Theoretical Astrophysics Program Travel Grant (University of Arizona) [Announcement]	\$1000
Jun 2020	Summer Undergraduate Research Grant (Northwestern University)	\$3500
Jun 2019	Undergraduate Research Assistantship Program (Northwestern University)	\$3500

Presentations

Jun 2022	Annual European Astronomical Society Meeting (EAS)	Poster
May 2022	UChicago High-Energy Astrophysics Journal Club	Talk
Jan 2022	239 th American Astronomical Society Meeting (Cancelled)	Poster

Awards

AY 2021 – 2022	Outstanding Undergraduate Thesis Research in the Physics and Astronomy Department Department Record ; Press Release .	Northwestern University Evanston, IL
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References

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

* Contact information available upon request