




Wasif Shaqil, M.Sc.

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Research Experience

- Dec. 2024 – Jun. 2025  **Master Thesis** Hamburg Observatory, University of Hamburg
Thesis title: Tidal Interaction in the Galactic Center - The Case of X7
– Investigated the tidal interaction of the enigmatic Galactic Center source X7 using test-particle simulations and compared them to the observational data from the W.M. Keck Telescope with the goal of constraining its formation and origin.
Supervisor: Prof. Dr. Stephan Rosswog, Dr. Diego Calderón
Collaborators: UCLA Galactic Center Group (PI: Andrea Ghez) and Prof. Dr. Jorge Cuadra (Universidad Adolfo Ibáñez, Chile)
- Dec. 2024  **Visiting M.Sc. Student** Max Planck Institute for Astrophysics, Garching
Hosts: Prof. Dr. Selma E. De Mink, Dr. Diego Calderón
- May 2024 – Sep. 2024  **Scientific Assistant** Hamburg Observatory
– Analyzed RAMSES hydrodynamical simulation data of the Wolf-Rayet stellar winds feeding the supermassive black hole Sgr A* in the Galactic Center using Python and YT.
Supervisor: Dr. Diego Calderón





Education

- 2022 – 2025  **M.Sc. in Physics**, University of Hamburg, Germany
Specialization: Astronomy & Astrophysics | *Grade:* 1.60
Thesis title: Tidal Interaction in the Galactic Center - The Case of X7
Supervisors: Prof. Dr. Stephan Rosswog, Dr. Diego Calderón
- 2018 – 2021  **B.Sc. in Physics**, Gauhati University, India
Major: Physics | *Minor:* Maths, Chemistry
Grade: 9.08 out of 10



Research Publications

- 1  Shaqil, W., Calderón, D., Rosswog, S., Cuadra, J., Ciurlo, A., Campbell, R. D., Morris, M. R. & Ghez, A. M.
Tidal phenomena in the Galactic Center: The Curious Case of X7. *Astronomy and Astrophysics* (in Prep).

Skills

- Languages  English (C1), German (B1), Assamese, Bengali, Hindi (Mother Tongue)
- Coding  Python, C/C++, SQL, \LaTeX
- Tools  Git, Visual Studio Code, Microsoft Office, ROOT, Mathematica
- Libraries  Scipy, TensorFlow, yt, AstroPy, NumPy, Matplotlib, Pandas, Seaborn, Plotly



Awards and Achievements

- Jul. 2024  UHH Degree Completion Grant (€4000), University of Hamburg
- May 2024  Quantum Universe Cluster of Excellence Grant (€3000), University of Hamburg


Awards and Achievements (continued)

May 2021  4th Position in National Level Quiz Competition, SPIE, IIT-Guwahati




Talks and Seminars

- Dec. 2024  **Invited Talk**, Ludwig Maximilian University Observatory, Munich
Presented my work on the tidal interaction of the enigmatic galactic center source X7 in the Computational Astrophysics (CAST) group seminar.
-  **Invited Talk**, Max Planck Institute for Astrophysics, Garching
Presented my work on the tidal interaction of the enigmatic galactic center source X7 in the Stellar department seminar.




Teaching History

- Apr. 2024 – Aug. 2024  **Academic Tutor** University of Hamburg
Exercise and grading assistant in the summer semester 2024 course "*Intro to General Relativity and its astrophysical applications*" by Prof. Dr. Robi Banerjee.





Extracurricular Activities

- Jul. 2024  Public Outreach - Galactic Center Virtual Reality demo at the Hamburg Observatory
- Since Sep. 2023  Journal Club - Active participant in the Journal club at the Hamburg Observatory
- 2017 – 2018  Literary Club - Member of the literary club of Cotton University, India

Certifications

- Aug. 2024  Supervised Machine Learning, Stanford University, DeepLearning.AI
- Dec. 2021  Python for Data Science and Machine Learning, Udemy
- Apr. 2020  Complete Python Bootcamp, Udemy

Workshops

- Jun. 2024  1 Day Workshop on the nuclear reaction network WINNet, Hamburg, Germany
- Feb. 2024  SIGRAV International School 2024, Salerno, Italy (Online)
- Dec. 2021  Workshop on "Python with Space Applications", Guwahati, India
- Jul. 2020  Summer Workshop on Plasma Physics, Jadavpur University, India

References

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Dr. Diego Calderón
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