## Ambica Govind


**Contact Information**

Department of Physics and Astronomy
University of Utah
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**Research Interests**

Observational Cosmology, Astrophysics of Galaxies and Clusters;
Survey Science, Analytical Modelling and Hydrodynamical Simulations

**Education**

**University of Utah, Salt Lake City, UT**
PhD Physics, May 2025- May 2030(expected)
GPA: –

**Indian Institute of Technology Hyderabad, Hyderabad, India**
B.Tech. Engineering Physics
GPA: 3.91/4.00, Degree: 2 of 29

**Honors and Awards**

Saroj Sharma Memorial Award for Excellence in Research, 2024
Institute Award for Excellence in Research, 2024
Institute Academic Excellence Award, 2023
Caltech Summer Undergraduate Research Fellowship, 2023
DAAD-WISE German Academic Exchange Scholarship, 2023
Australian National University Future Research Talent Award, 2023
IASc-INSA-NASI Summer Research Fellowship, 2023
Kishore Vaigyanik Protsahan Yojana Fellowship (Indian Institute of Science), 2023

**Research Experience**

**During Undergraduate Studies**

- Hunting Kilonovae using DESI and Wendelstein
  (Advisor: Prof. Daniel Gruen, LMU Munich)
- Rotation Curve Modelling to constrain dark matter profiles in disk galaxies
  (Advisor: Prof. Paolo Salucci, SISSA Trieste)
- Testing MOND and Entropic Gravity on a Galaxy Cluster
  (Advisor: Prof. Shantanu Desai, IIT Hyderabad)
- Disk Galaxies in IllustrisTNG: the Star-Forming Main Sequence, Size-Mass Relation and Baryonic Tully-Fisher Relation
  (Advisor: Dr. Gauri Sharma, Astronomical Observatory of Strasbourg)

**Workshops**

- Michigan Cosmology Summer School 2024
  Attended lectures on gravitational wave cosmology, inflation, structure formation and numerical/statistical tools.

**Teaching and Mentorship**

**At IIT Hyderabad**

- Teaching Assistant for Electrodynamics EP3110
- Teaching Assistant for Data Science Analysis PH6130

**Publications**

A. Govind, S. Desai, *A test of MOND and emergent gravity with SMACS J0723.3-7327 using eROSITA observations*, Journal of Cosmology and Astroparticle Physics, 2024(10), 030. doi:10.1088/1475-7516/2024/10/030

## Outreach

- The Matrix and its Elements: Observing the Cosmos, *Public Lecture*, Cepheid Symposium, Hyderabad(India).
- Dark Matter Debunked, *Public Lecture*, Cepheid Symposium, Hyderabad(India).
- Navigating Undergraduate Astronomy Research, *Public Lecture*, Cepheid Symposium, Hyderabad(India).

## References

**Prof. Shantanu Desai**
Professor of Physics, IIT Hyderabad
shantanud@phy.iith.ac.in