Preet Patel

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Summary

I am a **third year Astrophysics graduate student** pursuing a PhD at the University of California - Davis (UCD). My research areas include: galaxy formation, stellar elemental abundances, computational astrophysics, simulations, & high-performance computing, big data, and statistical methods.

Education

In Progress **PhD** in **Physics & Astronomy** at **University of California - Davis**
2015 - 2019 **B.S.** in **Astrophysics** at **University of Michigan - Ann Arbor**
Minor in Statistics
2015 - 2019 **B.S.** in **Physics** at **University of Michigan - Ann Arbor**

Publications

Patel, Preet B. et al. (June 2022). "Predictions for complex distributions of stellar elemental abundances in low-mass galaxies". In: 512.4, pp. 5671–5685. DOI: 10.1093/mnras/stac834. arXiv: 2110.08287 [astro-ph.GA].

Presentations

Talk: Galaxy Evolution Conference at CalTech Aug 2022
– 15 minute talk at the GalFRESCA conference held in Pasadena, CA. Detailing my published research from the last two years.
AAS Poster: *Predictions for Complex Elemental Abundance Patterns in Low Mass Galaxies* Jan 2020
– Preet Patel, Sarah Loebman, Andrew Wetzel; FIRE Collaboration
– Bibcode: 2020AAS...23516827P
Guest Lecture: COSMOS Summer Program at UC Davis July 2019
– Invited to speak in a joint lecture about GAIA, the Milky Way, and the Local Group at UC Davis.
– Sarah Loebman, Preet Patel

Experience

Teaching Assistant (TA) Multiple - Now
– *Dates of TA:* Jan 2023 - Now; March 2022 - June 2023; Oct 2020 - June 2021
– *Classes:* PHY 9B (F2020), PHY 7A (W2021), AST 25 (SPR2021), AST 25 (SPR2022), PHY 10 (now).

Grad Student Researcher (GSR) Multiple - Jan 2023
– *Dates of GSR:* June 2022 - Dec 2022; June 2021 - March 2022
– Graduate student research with Professor Andrew Wetzel in the Wetzelgroup. Characterize simulations of low-mass galaxies and develop modules for testing models of stellar feedback in post-processing.
Undergraduate Student Researcher (UC Davis) June 2019 - Aug 2019

Bluewaters Student Intern May 2018 - May 2019
– One of 19 students selected to be in the final cadre of the BlueWaters Student Internship program. 2 weeks of training at the Petascale Institute and a year of research with Prof. Sarah Loebman.

Skills

Academic	Scientific Writing, Persurasive Writing, Calculus, Linear Algebra, Statistical Methods, some Differential Geometry
Technical	Version Control, proficiency in Python, R, C/CUDA, HTML, Dreamweaver, Data visualization, Data Animation
Language	English, Gujarati, & working proficiency in Spanish
Other	Graphic Design (Photoshop, Cinema 4D), Media Production (Sony Vegas, After Effects)