

Ben Sherwin

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EDUCATION

Stanford University

PhD in Physics

Stanford, CA

Expected 2029

University of Florida

BS in Physics, Astrophysics, and Mathematics

Gainesville, FL

2024

RESEARCH INTERESTS

I am most interested in observational and theoretical cosmology with an emphasis on combining information from the Cosmic Microwave Background with surveys of large-scale structure.

RESEARCH POSITIONS

Undergraduate Researcher in Astronomy, University of Florida

2022—2024

Searching for Parity Violation Using Topological Data Analysis on the 4PCF | Advisor: Prof. Zack Slepian

NSF REU Student, Georgia Institute of Technology

2023

Predicting the UV Escape Fraction of Simulated Galaxies during Reionization with ML | Advisor: Prof. John Wise

Undergraduate Researcher in Physics, University of Florida

2021—2022

Forward Modeling of Merger Event to Determine Black Hole Properties | Advisor: Prof. Imre Bartos

PUBLICATIONS

- J. Tayar et al. (inc. **B. Sherwin**), “The Importance of Neural Network Hyperparameters in Age Inference Quality” (2023), [Research Notes of the AAS](#)
- **B. Sherwin**, S. Sethuram, C. Brummel-Smith, J.H. Wise, “Predicting the UV Escape Fraction of the First Galaxies in the Renaissance Simulations with Machine Learning” (2023), [Research Notes of the AAS](#)
- **B. Sherwin**, “Analyzing Phenotypic Properties of Bladder Cancer Using Ordinary Differential Equations” (2019), [bioRxiv](#)

POSTERS AND TALKS

- *Cosmology Pedagogy Talk*, Meetings of Astrophysics Students at Stanford, 2025
- *Cosmic Neutrino Background: A Story of Epic Proportions*, Meetings of Astrophysics Students at Stanford, 2025
- *Predicting the UV Escape Fraction of the First Galaxies in the Renaissance Simulations with Machine Learning*, 243rd AAS Meeting, 2024
- *Searching for Parity Violation Using Topological Data Analysis on the Galaxy 4-Point Correlation Function*, UF Research Symposium, 2023

TEACHING

- Physics 16: The Origin and Development of the Cosmos, 2025
- Physics 44: Electricity and Magnetism Lab, 2025

AWARDS

- NSF Graduate Research Fellowship (\$159,000)
- Fletcher Jones Foundation Fellowship (\$15,600)
- UF Platinum Presidential Scholarship (\$40,000)
- UF College of Liberal Arts Excellence Award (\$3,500)

SERVICE AND LEADERSHIP

- Program Manager of Stanford PIE (Physics Inclusion and Equity) Program
- Executive Member of the Stanford Graduate Students of Applied Physics and Physics (GSAPP)
- President of the UF Society of Physics Students
- Member of UF Physics IDEA (Inclusion, Diversity, and Equity Alliance)
- Center for Undergraduate Research Ambassador
- Member of the University Liaison Council

OUTREACH AND MENTORSHIP

- Mentor for Stanford Undergraduate Directed Reading Program
- Stanford Splash Lecturer
- Booth Leader at KIPAC Community Day
- Author for Astrobites
- Tour Guide at SLAC National Accelerator Laboratory
- Panel Member for Ethics in Physics Workshop
- Treasurer of the Science Communicators
- Lead Organizer for UN International Women in STEM Day
- Developer and Head of UF Physics Peer Mentorship Program