

Ben Sherwin

Ph.D. Candidate

Stanford University

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Summary: I am a third-year graduate student at Stanford University interested in observational cosmology. I am advised by Prof. Josh Frieman and am supported by an NSF Graduate Research Fellowship. I work as a member of the Kavli Institute for Particle Astrophysics and Cosmology (KIPAC) at Stanford and SLAC.

Education

PhD, Stanford University , in Physics Advisor: Prof. Josh Frieman Research Interests: Lyman-break galaxies, high-redshift cosmology, CMB secondaries, cross-correlations	2029 (expected)
MS, Stanford University , in Physics GPA: 3.97/4.0	2026
BS, University of Florida , in Astrophysics, Physics, and Mathematics GPA: 3.98/4.0, magna cum laude, Phi Beta Kappa Thesis: <i>Probing Parity Violation with the 4-Point Correlation Function Using Topological Data Analysis</i>	2024

Fellowships & Awards

NSF Graduate Research Fellowship (\$159,000)	2024–2029
Stanford Student Projects for Intellectual Community Enhancement Grant (\$3,000)	2026
Fletcher Jones Foundation Fellowship (\$15,600)	2025
UF College of Liberal Arts and Sciences Excellence Award (\$3,500)	2024
NSF REU at Georgia Institute of Technology (\$6,000)	2023
UF Platinum Presidential Scholarship (\$40,000)	2020–2024

Publications

The following symbol denotes first author or major contributions 

-  1. “Photo- z Calibration Requirements for High- z Cosmology Using Lyman-break Galaxies Detected by LSST,” **Sherwin, B.C.**, Crenshaw J.F., et al., 2026. (in prep)
-  2. “Forecasts for High- z Cosmology Using Lyman-break Galaxies Detected by LSST,” Crenshaw J.F., **Sherwin, B.C.**, Sarcevic N., et al., 2026. (in prep)
3. “The Importance of Neural Network Hyperparameters in Age Inference Quality” Tayar J. et al. (inc. **Sherwin, B.C.**), 2023. [RNAAS](#)
-  4. “Predicting the UV Escape Fraction of the First Galaxies in the Renaissance Simulations with Machine Learning” **Sherwin, B.C.**, Sethuram S., Brummel-Smith C., Wise J.H., 2023. [RNAAS](#)
-  5. “Analyzing Phenotypic Properties of Bladder Cancer Using Ordinary Differential Equations” **Sherwin, B.C.**, Farrell-Fairbanks M., Altmann P. 2019. [bioRxiv](#)

Service

Member, KIPAC Communications Committee	2026–Present
– Write and edit blog posts for the KIPAC website to highlight internal research	
Convener, Meetings of Astrophysics Students at Stanford (MASS)	2026–Present
– Host weekly meetings for students to give low-pressure, long-form astrophysics talks	
Member, Stanford Physics Equity and Inclusion Committee	2025–Present
– Working with faculty, postdocs, and students to improve climate within Stanford Physics	
Program Manager, Stanford Physics Identity and Equity (PIE) Predoctoral Program	2025–Present
– Leading program assisting undergraduates across the U.S. with the graduate school application process	
Executive Member, Stanford Graduate Students of Applied Physics and Physics (GSAPP)	2025–Present
– Planning social and departmental events for over 400 Stanford graduate students	
President, UF Society of Physics Students	2022–2024
– Spearheaded efforts to increase faculty-student engagement; hosted events for career opportunities	
Member, UF Physics IDEA (Identity, Diversity, and Equity Alliance)	2022–2024
– Worked with faculty, staff, and students to broaden participation in physics at all levels	
Ambassador, UF Center for Undergraduate Research	2023–2024
– Promoted undergraduate research in the UF College of Liberal Arts and Sciences	
Member, University Liaison Council	2023–2024
– Communicated across departments to promote research in underrepresented fields	

Outreach

Author, Astrobites [see my posts here]	2026–Present
– Write blog posts to convey the main ideas of astrophysics papers at an undergraduate level	
Tour Guide, SLAC National Accelerator Laboratory	2025–Present
– Lead public and educational tours of SLAC	
Lecturer, Stanford Splash Program	2025, 2026
– Created one-day classes on dark matter and dark energy for 100+ high school students	
Booth Leader, KIPAC Community Day	2025
– Led a team of volunteers to demonstrate the concept of general relativity to 8,000 attendees	
Pen Pal, Letters to a Pre-Scientist	2025
– Wrote letters each quarter to a middle-schooler interested in space	
Lead Organizer, UN International Women in STEM Day	2023–2024
– Coordinated efforts across STEM departments to connect to local K-12 students with demos	
Treasurer, Science Communigators	2021–2022
– Handled finances and organized events for writing, video production, and journalism	

Teaching

Average TA Evaluation Score: 4.8/5

Physics 161/261: Introduction to Cosmology and Extragalactic Astrophysics

Spring 2026

Physics 16: The Origin and Development of the Cosmos

Summer 2025

Physics 44: Electricity and Magnetism Lab

Spring 2025

Mentorship

Michelle Park: *Stanford Physics BS/MS student, awarded Goldwater Scholarship and NSF GRFP*

Huy Tran: *UF Physics PhD student, awarded NSF GRFP*

Gabriele Di Gianluca: *UF Physics undergraduate student, awarded Goldwater Scholarship*

Monique Kubovsky: *UF Physics undergraduate student, awarded Goldwater Scholarship and NSF GRFP, now Stanford Applied Physics PhD Student*

Josie Sullivan, Danny Gass, Kuokuo Li, Anton Chen: *Stanford undergraduates, worked on directed reading about DESI*

Posters and Talks

Rubin Community Workshop (Stanford, CA)

2026

LSST Dark Energy Science Collaboration Meeting (Boston, MA)

2026

Cosmic Rhythms CMBxLSS Workshop (Rio de Janeiro, BZ)

2026

KIPAC Tea: FRBs in the Era of LSST (Stanford, CA)

2026

Ethics in Physics Panel (Stanford, CA)

2025

AAS 243rd Meeting (New Orleans, LA)

2024

UF Research Symposium (Gainesville, FL)

2023

Georgia Tech REU Research Symposium (Atlanta, GA)

2023