Tim White

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Education

Ph.D. in Statistics 2022 - Present
University of Michigan Ann Arbor, MI
Advisor: Jeffrey Regier GPA: 3.94

M.A. in Statistics 2022 - 2024
University of Michigan Ann Arbor, MI

B.S. in Statistical Science, *summa cum laude* 2018 - 2022
University of Minnesota Minneapolis, MN
Secondary Major in Economics (Quantitative Emphasis), Minor in Mathematics GPA: 4.00

Research interests

- Variational inference
- Sequential Monte Carlo
- Flow-based generative models
- Markov chain Monte Carlo
- Distributionally robust optimization
- Astrophysics and cosmology

Publications

Journal papers

Tim White, Shreyas Chandrashekaran, Camille Avestruz, and Jeffrey Regier (2026+). Neural posterior estimation for tomographic weak lensing mass mapping. *In internal review with the Dark Energy Science Collaboration.* Code

Tim White, Dingrui Tao, Camille Avestruz, and Jeffrey Regier (2026+). Neural posterior estimation for inferring weak lensing shear under systematics. *In internal review with the Dark Energy Science Collaboration.* Code

Tim White and Sara Algeri (2023). Estimating the lifetime risk of a false positive screening test result. *PLoS ONE*, *18*(2), e0281153. Manuscript Code R Shiny dashboard

Conference papers

Tim White and Jeffrey Regier (2023). Sequential Monte Carlo for detecting and deblending objects in astronomical images. *NeurIPS Workshop on Machine Learning and the Physical Sciences.* Manuscript Code

Presentations

Distributionally Robust Neural Posterior Estimation
Michigan Student Symposium for Interdisciplinary Statistical Sciences. Ann Arbor, MI. March 2026

Neural Posterior Estimation for Mapping Weak Lensing Shear and Convergence
STAMPS Workshop on Neural Simulation-Based Inference. Pittsburgh, PA. October 2025
Joint Statistical Meetings. Nashville, TN. August 2025
Weak Lensing and Large-Scale Structure Working Group, Dark Energy Science Collaboration. Virtual. July 2025
Michigan Student Symposium for Interdisciplinary Statistical Sciences. Ann Arbor, MI. March 2025
Pixels to Objects Working Group, Dark Energy Science Collaboration. Virtual. January 2025

Sequential Monte Carlo Samplers for Probabilistic Object Detection in Images
Joint Statistical Meetings. Portland, OR. August 2024
Michigan Student Symposium for Interdisciplinary Statistical Sciences. Ann Arbor, MI. March 2024
NeurIPS Workshop on Machine Learning and the Physical Sciences. New Orleans, LA. December 2023

Estimating the Lifetime Risk of a False Positive Screening Test Result
Joint Statistical Meetings. Washington, DC. August 2022

Software

`smcdet`: Probabilistic object detection with sequential Monte Carlo samplers. github.com/timwhite0/smcdet

`blissWL`: Neural probabilistic weak lensing inference. github.com/prob-ml/blissWL

`drnpe`: Distributionally robust neural posterior estimation. github.com/timwhite0/drnpe

`flowmatching`: Posterior sampling with conditional flow matching. github.com/timwhite0/flowmatching

Teaching and mentorship

Graduate Student Mentor — August 2025 - Present
Department of Statistics, University of Michigan — Ann Arbor, MI

Mentor, Undergraduate Research Program in Statistics — Winter 2024, Winter 2026
Department of Statistics, University of Michigan — Ann Arbor, MI

Tutor for Undergraduate Statistics Students — January 2024 - Present
Department of Statistics, University of Michigan — Ann Arbor, MI

Graduate Student Instructor — August 2022 - May 2025
Department of Statistics, University of Michigan — Ann Arbor, MI

Fall 2024, Winter 2025	DATASCI 451: Bayesian Data Analysis *Advanced course for approximately 80 undergraduate statistics majors.*
Winter 2024	DATASCI 415: Data Mining and Statistical Learning *Advanced course for approximately 80 undergraduate statistics majors.*
Fall 2023	STATS 401: Applied Statistical Methods II *Core course for approximately 120 undergraduate statistics minors.*
Winter 2023	DATASCI 306: Introduction to Statistical Computing *Introductory course for approximately 160 undergraduate statistics majors and minors.*
Fall 2022	STATS 250: Introduction to Statistics and Data Analysis *Introductory course for approximately 800 undergraduates of all majors.*

Service

Civic Engagement and Service Committee Member — February 2024 - Present
Statistics Ph.D. Council, University of Michigan — Ann Arbor, MI

Datathon Judge — March 2024, March 2025
Hosted by Michigan Undergraduate Students of Statistics, University of Michigan — Ann Arbor, MI

Data Analyst — September 2019 - May 2022
College of Liberal Arts Student Board, University of Minnesota — Minneapolis, MN

Work experience

Intern, Data Science — August 2026 - November 2026
New York Mets — New York, NY

Intern, Data Science Summer Institute — May 2026 - August 2026
Lawrence Livermore National Laboratory — Livermore, CA

Undergraduate Research Assistant, IPUMS International — January 2019 - May 2022
Minnesota Population Center — Minneapolis, MN

Intern, Population and Development Branch — September 2021 - March 2022
United Nations Population Fund — New York, NY (remote)

Honors and awards

Outstanding Graduate Student Instructor Award April 2025
Department of Statistics, University of Michigan

Best Oral Presentation, Methods/Theory March 2025
Michigan Student Symposium for Interdisciplinary Statistical Sciences

Best Oral Presentation, Applications March 2024
Michigan Student Symposium for Interdisciplinary Statistical Sciences

Emerging Researcher Award March 2024
Department of Statistics Visit Day, University of Michigan

Buehler Memorial Undergraduate Award May 2022
School of Statistics, University of Minnesota

Honorable Mention, ASA Student Paper Competition January 2022
American Statistical Association, Section on Medical Devices and Diagnostics