

Isaiah T. Katz

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PhD Candidate, University of California, Santa Barbara
Department of Statistics and Applied Probability

Education

University of California, Santa Barbara

Ph.D., Statistics and Applied Probability

Thesis: Multivariate Dependency Models for Financial Time Series

Advisor: Gareth W. Peters

Santa Barbara, CA
Expected January 2027

M.A., Mathematical Statistics

GPA: 3.96/4.00

September 2021 – June 2023

Northwestern University

B.A. Mathematics, Minor in Statistics

GPA: 3.81/4.00; *cum laude*

Evanston, IL
September 2016 – June 2020

Research Interests

Time series methods · Multivariate analysis · Statistical signal processing · Machine learning applications
in econometrics and computational finance · Sequential decision making · Feature extraction methods

Publications and Working Papers

Katz, I. T., Campi, M., Peters, G.W. *Factor-Augmented Gaussian Process Models for Multiresolution Volatility Forecasting*. [In Preparation]

Katz, I. T., Campi, M., Peters, G.W. *CrossCurveR: An R Package for Stress Testing Multiple Yield Curves*. [In Preparation]

Katz, I. T., Peters, G. W., Campi, M. *Cross-Curve Interest Rate Stress Testing With Endogenous Curve Covariates*. [In Review] [SSRN Preprint]

van der Wee, E. B., Blackwell, B. C., Usabiaga, F. B., Sokolov, A., **Katz, I. T.**, Delmotte, B., Driscoll, M. M. *A simple catch: Fluctuations enable hydrodynamic trapping of microrollers by obstacles*. Science Advances, Vol. 9, Issue 10, 2023.

Talks and Presentations

Stress Testing Multiple Yield Curves (Poster Presentation)
Laboratoire de Mathématiques Blaise Pascal DATA Workshop

June 2025
Clermont Ferrand, France

Modeling Multi-Yield Curve Dependency Structures (Talk)
UCSB PSTAT Graduate Research Showcase

March 2025
Santa Barbara, CA

Research Visits and Events

Visiting PhD Student, Heriot Watt University, Edinburgh, Scotland Postponed, invited July 2025

- Hosted by Prof. George Tzougas

- Research topic: variational autoencoders for time series feature extraction

53rd St. Flour Probability Summer School, St. Flour, France

June 2025

- Selected participant (competitive admission process)
- Mini-Courses: Euclidean Quantum Field Theory, Modern Markov Chains, Deep Learning

Visiting PhD Student, Université Clermont Auvergne, Clermont-Ferrand, France

June 2025

- Hosted by Prof. Nourrdine Azzaoui
- Research topic: sequential change-point detection

Teaching

Teaching Associate (Instructor of Record, UCSB)

- PSTAT 10: Data Science Principles (Summer 2023)

Teaching Assistant (all UCSB):

- PSTAT 220AB: Advanced Statistical Methods (Graduate, Fall 2023, Winter 2024)
- PSTAT 194CS: Special Topics in Computational Statistics (Undergraduate, Spring 2024)
- PSTAT 174 / 274: Time Series (Cross-listed Undergraduate / Graduate, Fall 2024, Winter 2025, Spring 2025)
- PSTAT 160B: Applied Stochastic Processes (Undergraduate, Summer 2022)
- PSTAT 131/231: Machine Learning (Cross-listed Undergraduate / Graduate, Fall 2025)
- PSTAT 120ABC: Probability and Mathematical Statistics (Undergraduate, Spring 2022, Fall 2022, Winter 2023, Summer 2024, Summer 2025)
- PSTAT 10: Data Science Principles (Undergraduate, Summer 2022)
- PSTAT 8: Transition to Data Science, Probability and Statistics (Undergraduate, Spring 2023)
- PSTAT 5A / 5LS: Introduction to Statistics (Undergraduate, Fall 2021, Winter 2022)

Other Teaching

- PHYSICS 135ABC Peer Tutor, Northwestern Academic Support and Learning Advancement (2018 - 2020)

Professional Experience

WH Trading, LLC

Chicago, IL

Junior Trader (futures market making)

August 2020 – August 2021

Trading Intern (rotational program, various derivatives teams)

June 2019 – September 2019

Skills

Programming: R (advanced), Python (proficient), SQL (proficient), C++ (basic), Rust (basic)

Software: Bloomberg Terminal (proficient), Excel (proficient, basic VBA)

References

Available upon request