

Ruiqi Rae Yu

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[Google Scholar](#)

Education

Ph.D. in Operations Research & Financial Engineering 2021 – 2026
Princeton University

- Topics: Mathematical Statistics, Causal Inference
- Advisor: Matias Cattaneo, Department of Operations Research & Financial Engineering

M.A. in Operations Research & Financial Engineering 2021 – 2023
Princeton University

B.Sc. in Mathematics with Honors 2017 – 2021
University of Toronto

Research & Publications

Publications

1. Strong approximations for empirical processes indexed by Lipschitz functions, with M. D. Cattaneo
The Annals of Statistics, 53(3), 1203–1229, 2025.

Working Papers

1. The honest truth about causal trees: Accuracy limits for heterogeneous treatment effect estimation, with M. D. Cattaneo and J. M. Klusowski.
arXiv preprint, 2025.
2. Robust inference for the direct average treatment effect with treatment assignment interference, with M. D. Cattaneo, Y. He.
arXiv preprint, 2025.
3. Estimation and inference in boundary discontinuity designs: Location-based methods, with M. D. Cattaneo and R. Titiunik.
arXiv preprint, 2025.
4. Estimation and inference in boundary discontinuity designs: Distance-Based Methods, with M. D. Cattaneo and R. Titiunik.
arXiv preprint, 2025.
5. Estimation and Inference in Boundary Discontinuity Designs: Pooling-Based Methods, with M. D. Cattaneo and R. Titiunik.
6. Boundary Discontinuity Designs: Theory and Practice, with M. D. Cattaneo and R. Titiunik.

Software Articles

1. rd2d: Causal Inference in Boundary Discontinuity Designs, with M. D. Cattaneo and R. Titiunik.
arXiv preprint, 2025.
with companion R package [rd2d \(CRAN\)](#).

Teaching

Princeton University

- ORF 524: Statistical Theory and Methods Fall 2025
- ORF 245: Fundamentals of Statistics Fall 2022, Spring 2023, Fall 2024

University of Toronto

- MAT 244: Ordinary Differential Equations Fall 2020

- MAT 137: Calculus Spring 2019
- MAT 223: Linear Algebra Fall 2018

Awards

Princeton University

- DDSS Graduate Fellowship in Social Data Science 2024, 2025

University of Toronto

- Coxeter Scholarship in Mathematics 2021, 2019
- Dean's List Scholar 2020, 2019, 2018
- The Chancellor's Scholarships 2020
- The George Gray Falle Scholarships 2019, 2018
- University of Toronto Scholar – Rogers 2019
- Adel S Sedra Undergraduate Scholarship in Mathematics 2018

Services

Peer Review

- Economic Letters
- Econometric Theory
- Journal of Causal Inference
- Journal of Econometrics
- Journal of the American Statistical Association
- Operations Research
- Statistical Science

Presentations & Conferences

- Joint Statistical Meeting 2025
Invited Paper Session on Regression Discontinuity Design with Complex Data
- Data-Driven Social Science Connect at Princeton University 2024