

Rajita Chandak

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Education

Princeton University

Ph.D. in Operations Research and Financial Engineering

Ph.D. Candidate in the Operations Research and Financial Engineering (ORFE) Department.

Advisor: [Dr. Matias Cattaneo](#)

Research Interests: Mathematical statistics, theoretical machine learning, causal inference, econometrics.

Princeton, NJ, USA

2019–Present

Princeton University

M.A. in Operations Research and Financial Engineering

Princeton, NJ, USA

2019–2021

Brown University

Sc.B. with Honors in Applied Mathematics-Economics

Honors Thesis: *Energy-aware optimization of scalable load balancing strategies*

Advisor: [Dr. Kavita Ramanan](#).

Providence, RI, USA

2015–2019

Research

Preprints

Convergence Rates of Oblique Regression Trees for Flexible Function Libraries

[arxiv:2210.14429](#)

Joint work with [Matias Cattaneo](#) and [Jason Klusowski](#), *R&R at Annals of Statistics*

Boundary Adaptive Local Polynomial Conditional Density Estimators

[arxiv:2204.10359](#)

Joint work with [Matias Cattaneo](#), [Xinwei Ma](#) and [Michael Jansson](#), *R&R at Bernoulli*

Companion software article: [arxiv:2204.10375](#)

Software

R packages: [lpcde](#)

Python packages: [lpdensity](#), [rddensity](#)

Manuscripts

Undergraduate Honors Thesis

Department for Applied Mathematics

Title: *Energy-aware optimization of scalable load balancing strategies*.

Advisor: [Dr. Kavita Ramanan](#).

Brown University

2018–2019

NSF Research Experience for Undergraduates (REU)

Center for Industrial Mathematics and Statistics, Worcester Polytechnic Institute (WPI)

Advisors: [Dr. Marcel Blais](#) and [Dr. Stephan Sturm](#)

Research sponsored by NSF on financial modelling with industry liaisons Doherty Advisors LLC and State Street Global Services. (Award DMS 1757685)

WPI

2018

NSF Research Experience for Undergraduates (REU)

Math Department, CSU Chico

Advisor: Dr. Ben Nolting.

Research sponsored by NSF on stochastic processes. (Award NSF 1559788)

California State University, Chico

2017

Teaching Experience

Graduate Assistant in Instruction

ORFE Department, Princeton University

Princeton, NJ

2020–Present

ORF 504: Financial Econometrics (Spring 2023),
ORF 524: Statistical Theory and Methods (Fall 2021, Fall 2022),
ORF 245: Fundamentals of Statistics (Fall 2020, Spring 2021).

Senior Thesis Writer's Group Co-Leader

Princeton, NJ

ORFE Department, Princeton University

2020-Present

Host programming workshops and office hours to support 4th year undergraduate students in the ORFE department with thesis research, development and writing.

Undergraduate Teaching Assistant

Providence, RI

Applied Mathematics Department, Brown University

2017 – 2019

TA for Dr. Debankur Mukherjee's APMA1720: Monte Carlo Simulations with Applications to Finance (Spring 2019),

TA for Dr. Srikar Prasad's MPA2065: Intro. to Data Science for the Masters of Public Affairs program (Spring 2018),

TA for Dr. Ben Kunsberg's APMA 1650 (Fall 2017).

Programming Skills

Advanced Proficiency: R, Python, Latex, Matlab, Mathematica

Intermediate Proficiency: C++, STATA, Java, HTML, CSS

Awards

School of Engineering and Applied Science Award for Excellence

2022

Princeton University

Conferences

Jane Street

New York City, NY

Graduate Research Fellowship Workshop

April 2023

Convergence Rates of Oblique Regression Trees for Flexible Function Libraries

Symposium for Undergraduates in Mathematical Sciences (SUMS)

Providence, RI

Brown University

March 2019

Delivered a talk based on undergraduate honors thesis.

Joint Mathematics Meeting

Baltimore, MD

AMS, MAA

2018, 2019

Presented research work done during REU at CSU, Chico in 2018. Presented results of research done during REU at WPI in 2019.

Women in Mathematics in New England (WIMIN)

Northampton, MA

Smith College

September 2018

Delivered a talk based on research done during REU at WPI.

MIST Workshop

Worcester, MA

WPI, Applied and Industrial Mathematics Institute for Secondary Teaching

July 2018

Delivered a talk based on research done during REU at WPI.

Symposium for Undergraduates in Mathematical Sciences (SUMS)

Providence, RI

Brown University

March 2018

Delivered a talk based on research done during REU at CSU, Chico.

Languages

English: Native Proficiency

Hindi: Native Proficiency