

# Rajita Chandak

ORFE, Princeton University – March 11, 2024

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## Appointments

### Bernoulli Instructor

Institute of Mathematics, École Polytechnique Fédérale de Lausanne (EPFL)

Lausanne, Switzerland

2024–

## Education

### Princeton University

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

Advisor: [Matias Cattaneo](#)

Princeton, NJ, USA

2019–2024

### Princeton University

M.A. in Operations Research and Financial Engineering (ORFE)

Princeton, NJ, USA

2019–2021

### Brown University

Sc.B. with Honors in Applied Mathematics and Economics

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

Advisor: [Kavita Ramanan](#).

Providence, RI, USA

2015–2019

## Research

### Publications

#### Convergence rates of oblique regression trees for flexible function libraries

[arxiv:2210.14429](#)

*Annals of Statistics*, forthcoming

with [Matias Cattaneo](#) and [Jason Klusowski](#)

#### Boundary adaptive local polynomial conditional density estimators

[arxiv:2204.10359](#)

*Bernoulli*, forthcoming

with [Matias Cattaneo](#), [Xinwei Ma](#) and [Michael Jansson](#)

### Preprints

#### lpcde: Local polynomial conditional density estimation and inference

[arxiv:2204.10375](#)

with [Matias Cattaneo](#), [Xinwei Ma](#) and [Michael Jansson](#)

### Working Papers

#### Consistency of the EM algorithm in high dimensions

with [Matias Cattaneo](#) and [Jason Klusowski](#)

#### Adaptive Mondrian random forests

with [Matias Cattaneo](#), [Jason Klusowski](#) and [William Underwood](#)

#### A new variable importance metric for oblique regression trees

with [Matias Cattaneo](#) and [Jason Klusowski](#)

## Teaching Experience

### Graduate Assistant in Instruction

ORFE, Princeton University

ORF 499: Senior Thesis (Spring 2024),

SML 312: Research Projects in Data Science (Fall 2023),

ORF 498: Senior Independent Research Foundations (Fall 2023),

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).

Princeton, NJ

2020–Present

### Senior Thesis Writer's Group Co-Leader

ORFE Department, Princeton University

Mentored 4th year undergraduate students in ORFE with thesis research and writing.

Princeton, NJ

2020–2023

## Undergraduate Teaching Assistant

Department of Applied Mathematics, Brown University

APMA1720: Monte Carlo Simulations with Applications to Finance (Spring 2019),

MPA2065: Intro. to Data Science for the Masters of Public Affairs program (Spring 2018),

APMA1650: Statistical Inference I (Fall 2017).

Providence, RI

2017 – 2019

## Software and Programming Skills

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R packages: [lpcde](#)

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

Additional programming experience: Matlab, Mathematica, Julia, C++, STATA, Java, HTML, CSS

## Awards

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School of Engineering and Applied Science Travel Grant

2023

Princeton University

School of Engineering and Applied Science Award for Excellence

2022

Princeton University

## Work Experience

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NSF Research Experience for Undergraduates (REU)

Award DMS 1757685

Worcester Polytechnic Institute (WPI), MA

2018

NSF Research Experience for Undergraduates (REU)

Award NSF 1559788

California State University (CSU), Chico, CA

2017

## Conferences

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Joint Statistical Meeting

Invited speaker, Topic-contributed session on decision trees and random forests

Toronto, CA

August 2023

Statistical foundations of data science and their applications

Princeton University

Princeton, NJ

May 2023

Local organizing committee member

Jane Street

Invited speaker, Graduate Research Fellowship Workshop

New York City, NY

April 2023

Symposium for Undergraduates in Mathematical Sciences (SUMS)

Invited speaker, hosted at Brown University

Providence, RI

2018, 2019

Joint Mathematics Meeting

AMS, MAA

Baltimore, MD

2018, 2019

Women in Mathematics in New England (WIMIN)

Smith College

Northampton, MA

September 2018

MIST Workshop

WPI, Applied and Industrial Mathematics Institute for Secondary Teaching

Worcester, MA

July 2018

## Peer Review

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Journal of the American Statistical Association, Econometric Theory, Operations Research, Journal of Causal Inference.

## References

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Matias Cattaneo ORFE, Princeton University ([cattaneo@princeton.edu](mailto:cattaneo@princeton.edu))

Jason Klusowski ORFE, Princeton University ([jason.klusowski@princeton.edu](mailto:jason.klusowski@princeton.edu))

Jianqing Fan ORFE, Princeton University ([jqfan@princeton.edu](mailto:jqfan@princeton.edu))