

# Rajita Chandak

Institute of Mathematics, EPFL – September 9, 2024

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## Appointments

### Bernoulli Instructor

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

Mentor: [Victor Paneretos](#)

Lausanne, Vaud, Switzerland

2024–2026

### Assistant Professor

*Department of Statistics, University of Wisconsin-Madison*

Madison, WI, USA

starting 2026

## Education

### Princeton University

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

**Dissertation:** *Adaptive nonparametric statistical theory and implementation*

**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

*Annals of Statistics* 2024, Vol. 52, No. 2, 466–490

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

#### Boundary adaptive local polynomial conditional density estimators

*Bernoulli*, 2024, Vol. 30, No. 4, 3193–3223

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

### Preprints

#### On the convergence of a federated expectation-maximization algorithm

with [Zhixu Tao](#) and [Sanjeev Kulkarni](#)

[arxiv:2408.05819](#)

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

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

[arxiv:2204.10375](#)

### Working Papers

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

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

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

#### Adaptive Mondrian random forests

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

## Teaching Experience

### Graduate Assistant in Instruction

*ORFE, Princeton University*

Princeton, NJ

2020–2024

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).

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

ORFE Department, Princeton University

Princeton, NJ

2020-2023

Mentored 4th year undergraduate students in ORFE with thesis research and writing. Offered as a regular course (ORF 498/499) starting Fall 2023.

### Undergraduate Teaching Assistant

Department of Applied Mathematics, Brown University

Providence, RI

2017 – 2019

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).

## Honors and Awards

### Invited paper for Annals of Statistics session at Joint Statistical Meeting (JSM)

2025

Paper: "Convergence Rates of Oblique Regression Trees for Flexible Function Libraries"

### Bernoulli Instructorship

2024 – 2026

École Polytechnique Fédérale de Lausanne (EPFL)

### School of Engineering and Applied Science Travel Grant

2023

Princeton University

### Finalist for Graduate Research Fellowship

2023

Jane Street

### School of Engineering and Applied Science Award for Excellence

2022

Princeton University

## Software and Programming Skills

R packages: [lpcde](#)

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

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

## Work Experience

### NSF Research Experience for Undergraduates (REU)

Worcester Polytechnic Institute (WPI), MA

Award DMS 1757685

2018

### NSF Research Experience for Undergraduates (REU)

California State University (CSU), Chico, CA

Award NSF 1559788

2017

## Talks and Conferences

### Joint Statistical Meeting

Toronto, CA

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

August 2023

### Statistical foundations of data science and their applications

Princeton, NJ

Princeton University

May 2023

Local organizing committee member

### Jane Street

New York City, NY

Invited speaker, Graduate Research Fellowship Workshop

April 2023

### Symposium for Undergraduates in Mathematical Sciences (SUMS)

Providence, RI

Invited speaker, hosted at Brown University

2018, 2019

### Joint Mathematics Meeting

Baltimore, MD

AMS, MAA

2018, 2019

### Women in Mathematics in New England (WIMIN)

Northampton, MA

Smith College

September 2018

**MIST Workshop**

*WPI, Applied and Industrial Mathematics Institute for Secondary Teaching*

**Worcester, MA**

*July 2018*

## **Peer Review**

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