Rajita Chandak

Institute of Mathematics, EPFL – September 18, 2024
rajita.chandak@epfl.ch • rajitachandak.github.io • rajitachandak

Appointments

Bernoulli Instructor — **Lausanne, Vaud, Switzerland**
Institute of Mathematics, École Polytechnique Fédérale de Lausanne (EPFL) — *2024–2026*
Mentor: Victor Paneretos

Assistant Professor — **Madison, WI, USA**
Department of Statistics, University of Wisconsin-Madison — *starting 2026*

Education

Princeton University — **Princeton, NJ, USA**
Ph.D. in Operations Research and Financial Engineering (ORFE) — *2019–2024*
Dissertation: *Adaptive nonparametric statistical theory and implementation*
Advisor: Matias Cattaneo

Princeton University — **Princeton, NJ, USA**
M.A. in Operations Research and Financial Engineering (ORFE) — *2019-2021*

Brown University — **Providence, RI, USA**
Sc.B. with Honors in Applied Mathematics and Economics — *2015–2019*
Honors Thesis: *Energy-aware optimization of scalable load balancing strategies*
Advisor: Kavita Ramanan

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

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 — **arxiv:2408.05819**
with Zhixu Tao and Sanjeev Kulkarni

`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

A new variable importance metric for oblique regression trees

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

University of Groningen — **Groningen, NL**
Econometrics Seminar, Department of Economics — *February 2024*

London School of Economics (LSE) — **London, UK**
Statistics Seminar, Department of Statistics — *January 2024*

University of Wisconsin-Madison — **Virtual**
Statistics Seminar, Department of Statistics — *January 2024*

EPFL Statistics Seminar — **Virtual**
Statistics Seminar, Institute of Mathematics — *December 2023*

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, USA**
Princeton University — *May 2023*
Local organizing committee member

Jane Street — **New York City, NY, USA**
Invited speaker, Graduate Research Fellowship Workshop — *April 2023*

Symposium for Undergraduates in Mathematical Sciences (SUMS) — **Providence, RI, USA**
Invited speaker, hosted at Brown University — *2018, 2019*

Joint Mathematics Meeting — **Baltimore, MD, USA**
AMS, MAA — *2018, 2019*

Women in Mathematics in New England (WIMIN) — **Northampton, MA, USA**
Smith College — *September 2018*

MIST Workshop — **Worcester, MA, USA**
WPI, Applied and Industrial Mathematics Institute for Secondary Teaching — *July 2018*

Teaching Experience

Lecturer (as Bernoulli Instructor) — **Lausanne, CH**
Institute of Mathematics, EPFL — *2024-Present*
MATH 524: Nonparametric estimation and inference, Spring 2025.
MATH 413: Statistics for data science, Spring 2025 (co-taught with Myrto Limnios).

Graduate Assistant in Instruction — **Princeton, NJ, USA**
ORFE, Princeton University — *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).

Undergraduate Teaching Assistant — **Providence, RI, USA**
Department of Applied Mathematics, Brown University — *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).

Software and Programming Skills

R packages: **lpcde**
Python packages: **lpdensity**, **rddensity**
Additional programming experience: Matlab, Mathematica, Julia, C++, STATA, Java, HTML, CSS

Service

EPFL Statistics Seminar **2024–2026**
Co-organizer

Peer Review **Since 2021**
Bernoulli,
Journal of the American Statistical Association (JASA),
Econometric Theory,
Operations Research (OR),
Journal of Causal Inference (JCI).

Senior Thesis Writer's Group Co-Leader **Princeton, NJ**
ORFE Department, Princeton University *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.

Languages

English: Native Proficiency **Hindi:** Native Proficiency **French:** Intermediate (CEFR A2)