Rajita Chandak

Institute of Mathematics, EPFL – September 2025
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Appointments

Bernoulli Instructor — **Lausanne, Vaud, Switzerland**
Institute of Mathematics, École Polytechnique Fédérale de Lausanne (EPFL) — *2024–2026*
Chargée de cours et collaboratrice scientifique.
Mentor: Victor Panaretos

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

Research

Publications

`lpcde`: **Estimation and Inference for Local Polynomial Conditional Density Estimators**
Journal of Open Statistical Software, 10(107), 7241, March 2025
with Matias Cattaneo, Xinwei Ma and Michael Jansson

Convergence rates of oblique regression trees for flexible function libraries
Annals of Statistics, Vol. 52, No. 2, 466-490, April 2024
with Matias Cattaneo and Jason Klusowski

Boundary adaptive local polynomial conditional density estimators
Bernoulli, Vol. 30, No. 4, 3193-3223, November 2024
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 — *Under review*

Working Papers

Consistency of the EM algorithm in high dimensions
with Matias Cattaneo and Jason Klusowski

Manipulation testing based on distance to boundaries
with Matias Cattaneo and Xinwei Ma and Michael Jansson

A new variable importance metric for oblique regression trees

Honors and Awards

2024 Scholar Award — **2025**
Maheshwari Vidya Pracharak Mandal (MVPM), Pune, India

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), Switzerland

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

Talks and Conferences

CFE-CMStatistics **London, UK**
Invited speaker *December 2025*

24th European Young Statisticians Meeting (EYSM) **Torino, Italy**
Invited speaker *July 2025*

Conference for Women in Mathematics **Lausanne, Switzerland**
Invited speaker *May 2025*

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 (Chargée de cours) **Lausanne, CH**
Institute of Mathematics, EPFL *2024-Present*
MATH 524: Nonparametric estimation and inference (Spring 2025, Spring 2026).
MATH 562: Statistical Inference (Fall 2025),
MATH 413: Statistics for data science (Spring 2025) (co-taught with Myrto Limnios).

Graduate Assistant in Instruction **Princeton, 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, 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).

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*

Software and Programming Skills

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

Service

Masters student supervision **2024–2026**
Primary advisor
Mentoring masters theses and semester projects for students in Masters programs in the Institute of Mathematics (includes the Masters of Applied Mathematics, Masters of Statistics and Masters of Mathematics).

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

Peer Review **Since 2021**
Annals of Statistics, Bernoulli, Econometric Theory, Journal of the American Statistical Association (JASA), Journal of Causal Inference (JCI), Journal of Econometrics (JOE), Journal of Machine Learning Research (JMLR), Journal of Statistical Planning and Inference, Operations Research (OR).

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 B1)