

Roshni Sahoo

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Academic Appointments

Assistant Professor, Decision, Risk, and Operations Division
Columbia Business School

7/2026 –

Education

Ph.D. Computer Science, Stanford University
Advisor: Stefan Wager

9/2020 – 6/2026

B.S. Computer Science and Engineering, MIT
B.S. Mathematics, MIT

9/2016 – 6/2020

Awards

Rising Star in ISyE-MS&E-IOE, Georgia Tech, 2025.

Rising Star in Data Science, University of Chicago, 2023.

Future Leader in Data Science, University of Michigan, 2023.

Phi Beta Kappa Honor Society, 2020.

IEEE Eta Kappa Nu (HKN) Honor Society, 2019.

Fellowship and Grants

Stanford Diversifying Academia, Recruiting Excellence Fellowship, 2024.

Spectrum Population Health Sciences Pilot Grant Recipient, 2023.

Stanford Data Science Scholar Fellowship, 2022.

McCoy Family Center for Ethics in Society Graduate Fellowship, 2021.

NSF Graduate Research Fellowship, 2020.

Research

Preprints

$\alpha\beta$ indicates alphabetical author order, † denotes undergraduate mentee.

1. **Sahoo, Roshni**, Joshua Blumenstock, Paul Niehaus, Leo Selker, Stefan Wager. (2025) What Would it Cost to End Extreme Poverty? (No. w34583). National Bureau of Economic Research.
2. Guan, Amy†, **Roshni Sahoo**, Joshua Salomon, Stefan Wager, Marissa Reitsma. (2025) Data Fusion for High-Resolution Estimation. *ArXiv e-prints*, [abs/2508.14858](https://arxiv.org/abs/2508.14858).
3. ($\alpha\beta$) Lei, Lihua, **Roshni Sahoo**, Stefan Wager. (2023) Policy Learning under Biased Sample Selection. *ArXiv e-prints*, [abs/2304.11735](https://arxiv.org/abs/2304.11735).

Publications

1. **Sahoo, Roshni**, Lihua Lei, Stefan Wager. (2026) Learning from a Biased Sample. *ArXiv e-prints, abs/2209.01754*. Forthcoming in *Management Science*.
2. **Sahoo, Roshni**, Stefan Wager. (2025) Policy Learning with Competing Agents. *Operations Research*, 73(5), 2515–2529.
3. **Sahoo, Roshni**, Shengjia Zhao, Alyssa Chen, Stefano Ermon. (2021) Reliable Decisions with Threshold Calibration. *Advances in Neural Information Processing Systems*.
4. Zhao, Shengjia, Michael P. Kim, **Roshni Sahoo**, Tengyu Ma, Stefano Ermon. (2021) Calibrating Predictions to Decisions: A Novel Approach to Multi-Class Calibration. *Advances in Neural Information Processing Systems*.
5. Gilitschenski, Igor, **Roshni Sahoo**, Wilko Schwarting, Alexander Amini, Sertac Karaman, Daniela Rus. (2020) Deep Orientation Uncertainty Learning based on a Bingham Loss. In *International Conference on Learned Representations*.

Selected Talks

Data Fusion for High-Resolution Estimation

- American Causal Inference Conference, 5/2026.
- MIT CODE Conference, 11/2025.
- Joint Statistical Meetings, 8/2025.
- International Conference on Statistics and Data Science, 6/2025.

Data Leakage in Recommendation System A/B Tests

- Bridging Industry and Academia in Causal Data Science Workshop, 11/2024.
- Omega-Causal, Google Research, NYC, 7/2024.

What Would it Cost to End Extreme Poverty?

- Statistics and Data Science & ICSD, Carnegie Mellon University, 2/2026.
- Industrial and Systems Engineering, USC, 1/2026.
- Operations Management & Operations Research and Statistics Groups, MIT Sloan, 1/2026.
- Decision, Risk, and Operations Group, Columbia Business School, 11/2025.
- Guest Lecture Cornell Tech ORIE 5355 (Decision Making Beyond Prediction), 11/2025.
- INFORMS Annual Meeting, 10/2025.
- Cornell Young Researchers Workshop, 10/2025.
- AI in Social Science Conference, University of Chicago, 9/2025.
- Statistics Seminar, Stanford University, 7/2025.
- Emma Brunskill Group Meeting, 6/2025.
- Workshop on AI and Analytics for Social Good, University of Maryland, 5/2025.
- Guest Lecture Stanford CS 106EA, 2/2025.
- Machine Learning in Economics Summer Conference, University of Chicago, 8/2024.
- Bravo/SNSF Workshop on Using Data to Make Decisions, Brown University, 7/2024.
- Algorithmic Fairness Seminar, Stanford University, 4/2024.
- Machine Learning Lunch, Stanford University, 4/2024.
- Econometrics Lunch, Stanford University, 4/2024.

Policy Learning under Biased Sample Selection

INFORMS Annual Meeting, 10/2024.
Interactive Causal Learning Conference, 11/2023.
Causal Data Science Meeting, 11/2023.
Econometrics Lunch, Stanford University, 10/2023.
Cornell Causal Reading Group, Cornell Tech, 10/2023.
Emma Brunskill Group Meeting, Stanford University, 5/2023.
Machine Learning Lunch, Stanford University, 4/2023.
Causal Inference Seminar, Stanford University, 4/2023.

Learning from a Biased Sample

American Causal Inference Conference, 5/2025.
BIRS Workshop on Bridging Prediction and Intervention Problems in Social Systems, 6/2024.
FDA Statistical Assessment Methodology and Diagnostic Biomarkers Meeting (SAMDB), 3/2024.
Rising Stars in Data Science, University of Chicago, 11/2023.
ACM EAAMO, 10/2023.
INFORMS Annual Meeting, 10/2023.
Joint Statistical Meetings, 8/2023.
Data Science for Social Good Summer Program, Stanford University, 8/2023.
MIDAS Future Leaders Summit, University of Michigan, 4/2023.
Machine Learning Lunch, Stanford University, 11/2022.
Algorithmic Fairness Seminar, Stanford University, 10/2022.
Causal Inference Seminar, Stanford University, 9/2022.

Policy Learning with Competing Agents

Causal Science Conference, Stanford University, 11/2022.
ACM EAAMO, 10/2022.
Algorithmic Fairness Seminar, Stanford University, 4/2022.
Causal Inference Seminar, Stanford University, 4/2022.
Machine Learning Lunch, Stanford University, 3/2022.

Deep Orientation Uncertainty Learning based on a Bingham Loss

Schlumberger Robotics and Intelligent Automation Webinar, 6/2020.

Reviewing

Journals (19): (# of papers in parentheses) *Biometrika* (3), *Communications in Statistics – Simulation and Computation* (1), *Journal of the American Statistical Association* (3), *Journal of Econometrics* (1), *Journal of the Royal Statistical Society: Series B* (5), *Management Science* (2), *Operations Research* (3), *Quantitative Economics* (1).

Conferences: EC 2026, FORC 2023, ACM FAccT (2023, 2024, 2025, 2026), NeurIPS 2025 (Workshop Proposals), NeurIPS 2023 (Conference), NeurIPS 2023 (Ethics), WiML (2023, 2024), ICLR (2024, 2025, 2026).

Other Academic Service

Outreach

Stanford FAST (Future Advancers of Science and Technology), Mentor, 9/2021 – 9/2023.
Stanford Graduate Women in Computer Science, Chair, 9/2022 – 9/2023.

Stanford Computing and Society, Organizer, 12/2020 – 4/2023.

Stanford CS Mentorship Program, Mentor, 9/2020 – 9/2021.

Stanford First-Generation and/or Low-Income (FLI) Mentorship Program, Mentor, 9/2020 – 9/2021.

Committees

Marketing Committee Lead, Stanford Data Science Conference, 2023.

Other

Session Chair, International Conference of Statistics and Data Science, 2025.

Discussant of “Principal-Agent Hypothesis Testing,” International Seminar of Selective Inference, 2022.

Panelist for Stanford AI4ALL, 2022.

Teaching

Exploring Artificial Intelligence (CS 106EA), Stanford University, Course Assistant, 2025.

Machine Learning (CS229), Stanford University, Course Assistant, 2024.

Introduction to Deep Learning (6.S191), MIT, Teaching Assistant, 2020.

Elements of Software Construction (6.031), MIT, Lab Assistant, 2018.

Industry Experience

Google Research, Algorithms and Optimization Team, Student Researcher, 6/2024 – 9/2024.

Supervised by Jennifer Brennan, Jean Pouget-Abadie.

Two Sigma, Software Engineering Intern, 6/2019 – 8/2019.

Cruise Automation, Software Engineering Intern, 6/2018 – 8/2018.

Northrop Grumman, Machine Learning Intern, 6/2017 – 8/2017.