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ASHESH RAMBACHAN

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Employment

2023-Present Assistant Professor, Department of Economics, M.I.T.
2022-2023 Postdoctoral Researcher, Microsoft Research New England.

Education

2022 Ph.D. in Economics, Harvard University.
2017 A.B., Economics, Princeton University, *Summa Cum Laude*.

Research Interests

Econometrics, Machine Learning.

Fellowships and Awards

2022 David A. Wells Prize for Best Dissertation in Economics.
2022 Review of Economic Studies European Tour.
2022 China Star Tour.
2017-2020 National Science Foundation Graduate Research Fellowship.

Working Papers

“Large Language Models: An Applied Econometric Perspective” (with Jens Ludwig and Sendhil Mullainathan).

“Program Evaluation with Remotely Sensed Outcomes” (with Rahul Singh and Davide Viviano).

“From Predictive Algorithms to Automatic Generation of Anomalies” (with Sendhil Mullainathan). Working paper. *Revise and Resubmit at Econometrica*.

“Robust Design and Evaluation of Predictive Algorithms under Unmeasured Confounding” (with Amanda Coston and Edward Kennedy). Working paper. *Revise and Resubmit at The Review of Economics and Statistics*.

“Design-based Uncertainty in Quasi-Experiments” (with Jonathan Roth). Working paper. *Revise and Resubmit at the Journal of the American Statistical Association*.

“Causal Interpretation of Structural IV Estimands” (with Isaiah Andrews, Nano Barahona, Matthew Gentzkow and Jesse Shapiro). Working paper. *Revise and Resubmit at the Quarterly Journal of Economics*.

“An Economic Approach to Regulating Algorithms” (with Jon Kleinberg, Jens Ludwig, and Sendhil Mullainathan). NBER Working Paper No. 27111.

“When do Common Time Series Estimands have Nonparametric Causal Meaning?” (with Neil Shephard). Working paper.

Journal Publications

“Identifying Prediction Mistakes in Observational Data.” 2024. *The Quarterly Journal of Economics*, 139 (3), Pp. 1665 – 1711.

“A More Credible Approach to Parallel Trends” (with Jonathan Roth). 2023. *The Review of Economic Studies*, 90 (5), Pp. 2555 – 2591.

“Panel Experiments and Dynamic Causal Effects: A Finite Population Perspective” (with Iavor Bojinov and Neil Shephard). 2021. *Quantitative Economics*, 12 (4), Pp. 1171-1196.

Research in Progress

“Large Language Models and the Knowledge Transfer Problem” (with Sendhil Mullainathan).

Conference Publications

“Evaluating the World Model Implicit in a Generative Model“ (with Justin Chen, Keyon Vafa, Jon Kleinberg and Sendhil Mullainathan). 2024. Accepted at the *Conference on Neural Information Processing Systems (NeurIPS)*.

“Do Large Language Models Generalize the Way People Expect? Measuring the Human Generalization Function” (with Keyon Vafa and Sendhil Mullainathan). 2024. Accepted at the *International Conference on Machine Learning (ICML)*.

“The Unreasonable Effectiveness of Algorithms” (with Jens Ludwig and Sendhil Mullainathan). 2024. *AEA Papers and Proceedings*, 114, pp. 623-627.

“Characterizing Fairness over the Set of Good Models under Selective Labels” (with Amanda Coston and Alexandra Chouldechova). 2021. *Proceedings of the 38th International Conference on Machine Learning (ICML)*, 139, Pp. 2144-2155.

“An Economic Perspective on Algorithmic Fairness” (with Jon Kleinberg, Jens Ludwig, and Sendhil Mullainathan). 2020. *AEA Papers and Proceedings*, 110, Pp. 91-95.

“Bias In, Bias Out? Evaluating the Folk Wisdom” (with Jonathan Roth). 2020. *1st Symposium on the Foundations of Responsible Computing (FORC)*, LIPIcs, 156, Pp. 6:1-6:15.

“Algorithmic Fairness” (with Jon Kleinberg, Jens Ludwig, and Sendhil Mullainathan). 2018. *AEA Papers and Proceedings*, 108, Pp. 22-27.

Invited Seminars

Scheduled	Ludwig Maximilian University (Economics); Stanford University (Economics); The Ohio State University (Economics).
2024	Harvard/MIT (Economics); University of Chicago Booth School of Business (Behavioral Economics); Harvard (Law, Economics & Organization); University of North Carolina (Economics); Sciences Po (Economics); University of Illinois Urbana-Champaign (Economics); University of Wisconsin – Madison (Economics); University of Southern California

(Economics); University of Texas – Austin (Economics); University of Chicago (Economics).

2023 Stanford University (Economics); Boston College (Economics); Georgetown (Economics); Yale (Political Science/Statistics); Philadelphia Federal Reserve; Harvard (Applied Statistics); Warwick (Economics); Northwestern (Economics); University College London (Economics); Bristol (Economics).

2022 Princeton (Economics); Microsoft Research New England; Harvard Business School (TOM); MIT (Economics); University of Chicago Booth School of Business (Microeconomics); Northwestern Kellogg School of Management (MEDS); Microsoft Office of the Chief Economist; University of Pennsylvania (Economics); University of California – Berkeley (ARE); Columbia University (Economics); Yale University (Statistics and Data Science); Columbia Business School (DRO Division); Carnegie Mellon Heinz College of Information Systems and Public Policy; Stanford University (MS&E); University of California – Berkeley (Economics); Chamberlain Online Seminar in Econometrics; Brown University (Economics); Duke University (Economics); Caltech (Economics); Penn State (Economics); Rutgers University (Economics); Michigan State University (Economics); Mannheim, Bonn, Frankfurt, Heidelberg, and Karlsruhe Online Econometrics Seminar (Economics); University of Toronto (Economics); Yale University (Economics); Boston University (Economics); Virtual Digital Economy Online Seminar.

Conference Presentations

- 2025 NBER Economics of Artificial Intelligence Conference; Econometrics Journal Special Session at the Royal Economic Society Conference; Econometric Society World Economic Congress.
- 2024 American Economic Association Annual Meeting; Microeconometrics Class of 2022 and 2023 Conference; Stanford Institute for Theoretical Economics (SITE) Conference; Econometric Society Interdisciplinary Frontiers (ESIF) conference on Economics and AI+ML; Econometric Society European Summer Meeting; Southern Economic Association Annual Conference.
- 2023 IAAE Annual Conference; Cowles/Yale Econometrics Conference; American Economic Association Annual Meeting; University of Chicago Conference on Econometrics in the Era of Machine Learning; CIREQ Econometrics Conference; NBER Summer Institute Digital Economics and AI.
- 2022 American Economic Association Annual Meeting; ACM SIGEcom Winter Meeting; Society for Economic Dynamics Annual Meeting; NBER Economics of Artificial Intelligence Conference; INFORMS Annual Meeting; Southern Economic Association Annual Meeting.
- 2021 Econometric Society North American Winter Meeting; Brookings

Institution's Artificial Intelligence Conference; ACM FAccT 2021 Tutorial on Algorithmic Fairness and Economics; ETH Online Seminar in Economics + Data Science; ZEW Conference on the Economics of Information and Communication Technologies; NBER Summer Institute (Forecasting and Empirical Methods); Southern Economic Association Annual Meeting.

- 2020 American Economic Association Annual Meeting; NBER Economics of Artificial Intelligence Conference; Carnegie Mellon Fairness, Accountability, and Transparency in Machine Learning Reading Group.
- 2019 NBER-NSF Time Series Conference; CEMMAP Workshop on Causal Inference with Interactions; European Conference of the Econometrics Community (EC)².

Professional Service

Referee

American Economic Review; American Economic Review: Insights; American Economic Journal: Policy; Biostatistics; Econometrica; Epidemiology; Games and Economic Behavior; Journal of Applied Econometrics; Journal of the American Statistical Association; Journal of Business and Economic Statistics; Journal of Econometrics; Journal of Money, Credit and Banking; Journal of Political Economy; Journal of Political Economy Microeconomics; The Econometrics Journal; The Economic Journal; The Review of Economics and Statistics; The Review of Economic Studies; The Quarterly Journal of Economics; Quantitative Economics.

35th Conference on Neural Information Processing Systems (NeurIPS) 2021; The International Conference on Machine Learning (ICML) 2022; 36th Conference on Neural Information Processing Systems (NeurIPS) 2022; Transactions on Machine Learning Research; The International Conference on Machine Learning (ICML) 2023; The International Conference on Machine Learning (ICML) 2024; The International Conference on Machine Learning (ICML) 2025.

Awards

Best Reviewer -- ACM Conference on Fairness, Accountability, and Transparency (FAccT) 2022; Outstanding Reviewer – The International Conference on Machine Learning (ICML) 2022.

Program Committee

NeurIPS 2021 Workshop on Machine Learning Meets Econometrics; ACM Conference on Fairness, Accountability, and Transparency (FAccT) 2022; International Conference on Computational Social Science (IC2S2) 2022; International Conference on Computational Social Science (IC2S2) 2023; ACM Conference on Fairness, Accountability, and Transparency (FAccT) 2023; ACM Conference on Fairness, Accountability, and Transparency (FAccT) 2024; ACM Conference on Fairness, Accountability, and Transparency (FAccT) 2025; ACM Conference on Economics and Computation (EC) 2025.

Discussant	Southern Economic Association Annual Meeting 2020; American Economic Association Annual Meeting 2022; Becker Friedman Institute 2022 Conference on Discrimination in the 21 st Century; Southern Economic Association Annual Meeting 2022, American Economic Association Annual Meeting 2023; NBER Behavioral Finance Meetings 2023; NBER Summer Institute Crime 2023; NBER Summer Institute Labor Studies 2024; Harvard Data Science Initiative 2024.
Organizer	Machine Learning in Economics Summer Institute (MLESI) 2022; Yale/Cowles Econometrics Summer Conference 2023; Machine Learning in Economics Summer Institute (MLESI) 2023; Machine Learning in Economics Summer Institute (MLESI) 2024; Machine Learning in Economics Summer Conference (MLESC) 2024; Machine Learning in Economics Summer Institute (MLESI) 2025; Machine Learning in Economics Summer Conference (MLESC) 2025.