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## ASHESH RAMBACHAN

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### Employment

2025- Silverman (1968) Family Career Development Assistant Professor of Economics.  
 2023-2025 Assistant Professor, Department of Economics, M.I.T.  
 2022-2023 Postdoctoral Researcher, Microsoft Research New England.

### Visiting Positions

2025-2026 Stanford Institute for Economic Policy Research, Visiting Fellow.

### Other Affiliations

2026- The Bike Shop at MIT.  
 2025- Research Affiliate, Blueprint Labs.  
 2025- Research Affiliate, Learning Collider.  
 2024- Research Affiliate, The Center for Applied Artificial Intelligence.

### Education

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

### Teaching and Research Fields

Econometrics, Machine Learning.

### Grants and Honors

2026 Laude Moonshot Seed Honorable Mention.  
 2025-2028 National Science Foundation Research Grant, project title “Comparing Decision Makers: Theory and Implications for AI” (SES-2519938).  
 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

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

“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. *Revise and Resubmit at The Review of Economic Studies*.

### Journal Publications

“From Predictive Algorithms to Automatic Generation of Anomalies” (with Sendhil Mullainathan). 2026. *Econometrica*, Forthcoming.

“Robust Design and Evaluation of Predictive Algorithms under Unobserved Confounding” (with Amanda Coston and Edward Kennedy). 2026. *The Review of Economics and Statistics*, Forthcoming.

“Large Language Models: An Applied Econometric Framework” (with Jens Ludwig and Sendhil Mullainathan). 2025. *Annual Review of Economics*, Forthcoming.

“Design-based Uncertainty in Quasi-Experiments” (with Jonathan Roth). 2025. *The Journal of the American Statistical Association*, Forthcoming.

“Structural Estimation Under Misspecification: Theory and Implications for Practice” (with Isaiah Andrews, Nano Barahona, Matthew Gentzkow and Jesse Shapiro). 2025. *The Quarterly Journal of Economics*, 140 (3), pp. 1801-1855.

“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.

### **Refereed Conference Publications**

“What Has a Foundation Model Found? Using Inductive Bias to Probe for World Models” (with Peter Chang, Keyon Vafa and Sendhil Mullainathan). 2025. *Proceedings of the 42<sup>nd</sup> International Conference on Machine Learning (ICML)*.

“Evaluating the World Model Implicit in a Generative Model” (with Justin Chen, Keyon Vafa, Jon Kleinberg and Sendhil Mullainathan). 2024. *Proceedings of the 38<sup>th</sup> Conference on Neural Information Processing Systems (NeurIPS)*. Spotlight Award.

“Do Large Language Models Perform the Way People Expect? Measuring the Human Generalization Function” (with Keyon Vafa and Sendhil Mullainathan). 2024. *Proceedings of the 41<sup>st</sup> International Conference on Machine Learning (ICML)*.

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

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

### **Non-Refereed Conference Publications**

“Causal Inference with Satellite Imagery: A Comparison of Methods for Forest Conservation Data” (with Haya Alsharif, Rahul Singh and Davide Viviano). 2026. *AEA Papers and Proceedings*, 116, pp. 87-91.

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

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

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

### **Other Writing**

“Algorithms as a Vehicle to Reflective Equilibrium: Behavioral Economics 2.0” (with Jens Ludwig, Sendhil Mullainathan, and Sophia L. Pink). 2025. In Ajay K. Agrawal, Erik Brynjolfsson, and Anton Korinek, eds., *The Economics of Transformative AI*. University of Chicago Press. NBER Conference Volume.

“Science in the Age of Algorithms” (with Sendhil Mullainathan). 2025. In Ajay K. Agrawal, Erik Brynjolfsson, and Anton Korinek, eds., *The Economics of Transformative AI*. University of Chicago Press. NBER Conference Volume.

### **Work in Progress**

“From Next-Token Prediction to Automata Induction” (with Sendhil Mullainathan and Janani Sekar).

“Human Decisions and Machine Predictions in Multistage Systems” (with Jason Baron, Will Dobbie, Richard Lombardo, and Joseph Ryan).

“Can Humans Add Value Even When Algorithms Outperform Them?” (with Nikhil Agarwal, Simon Hodson and Yucheng Shang).

### **Invited Seminars**

Scheduled	Aarhus University (Economics); University of Copenhagen (Data Science); Collegio Carlo Alberto (Economics).
2026	Stanford University (Political Science, Economics, Digital Economy, AI); University of Southern California (Statistics and Data Science); Princeton University (Economics); University of Washington (Economics); Harvard Business School; University of California – Berkeley (Statistics); University of California – Berkeley (Economics).
2025	Stanford University (Economics); Ludwig Maximilian University (Economics); Yale University (Economics); The Supervisory Research Forum Virtual Seminar; University of Toronto Causal Inference and Data Science Workshop; University of California – Berkeley (Economics); University of California – Berkeley (Statistics); Online Seminar in Economics and Data Science (ETH Zurich); Virtual Quant Marketing Seminar; University of California – Davis (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

- 2026 American Economic Association Annual Meeting; Simons Institute Workshop on Bridging Prediction and Intervention Problems in Social Systems; NBER Healthcare and AI Conference; UCSB AI and Economics Conference; NBER Summer Institute Digital Economics and AI.
- 2025 NBER Economics of Artificial Intelligence Conference; Econometrics Journal Special Session at the Royal Economic Society Conference; Econometric Society World Economic Congress; Shaping the Future of Work Microconference; UChicago AI in Social Science Conference; USC Conference on AI and Economics; Price College of Business (PCOB) Colloquium.
- 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)<sup>2</sup>.

## Professional Service

### Referee

*American Economic Review; American Economic Review: Insights; American Economic Journal: Applied; American Economic Journal: Policy; Biometrika; Biostatistics; Econometrica; Epidemiology; Games and Economic Behavior; Harvard Data Science Review; Journal of Applied Econometrics; Journal of the American Statistical Association; Journal of Business and Economic Statistics; Journal of Econometrics; Journal of the European Economic Association; Journal of Money, Credit and Banking; Journal of Political Economy; Journal of Political Economy Microeconomics; Journal of the Royal Statistical Society: Series B; The Econometrics Journal; The Economic Journal; The Review of Economics and Statistics; The Review of Economic Studies; The Review of Financial Studies; The Quarterly Journal of Economics; Quantitative Economics.*

*35<sup>th</sup> Conference on Neural Information Processing Systems (NeurIPS) 2021; The International Conference on Machine Learning (ICML) 2022; 36<sup>th</sup> 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; Conference on Neural Information Processing Systems (NeurIPS) 2025; The International Conference on Learning Representations*

*(ICLR) 2025; The International Conference on Machine Learning (ICML) 2026.*

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; Conference on Neural Information Processing Systems (NeurIPS) 2025 – Position Paper Track; ACM Conference on Equity and Access in Algorithms, Mechanisms and Optimization 2025; ACM Conference on Economics and Computation (EC) 2026.
Discussant	Southern Economic Association Annual Meeting 2020; American Economic Association Annual Meeting 2022; Becker Friedman Institute 2022 Conference on Discrimination in the 21 <sup>st</sup> 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; American Economic Association Annual Meeting 2026.
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; Machine Learning in Economics Summer Institute (MLESI) 2026; Machine Learning in Economics Summer Conference (MLESC) 2026.

### **Teaching Experience**

Statistical Methods in Economics (Graduate), MIT.	2024.
Algorithms and Behavioral Science (Graduate), MIT.	2024-2025.
Algorithmic and Human Decision-Making (Undergraduate), MIT.	2024-2025.

