

Stanford



Susan Athey

Economics of Technology Professor, Senior Fellow at the Stanford Institute for Economic Policy Research, at the Stanford Institute for Human-Centered AI and Professor, by courtesy, of Economics

Bio

ACADEMIC APPOINTMENTS

- Professor, Economics
- Senior Fellow, Stanford Institute for Economic Policy Research (SIEPR)
- Senior Fellow, Institute for Human-Centered Artificial Intelligence (HAI)
- Professor (By courtesy), Economics
- Member, Institute for Computational and Mathematical Engineering (ICME)
- Member, Wu Tsai Neurosciences Institute

Teaching

COURSES

2025-26

- Competitive Strategy for Technology Markets: STRAMGT 386 (Spr)
- Research Fellows Practicum: GSBGEN 697 (Aut, Win, Spr)

2024-25

- Competitive Strategy for Technology Markets: STRAMGT 386 (Spr)
- Research Fellows Practicum: GSBGEN 697 (Sum)

2023-24

- Research Fellows Practicum: GSBGEN 697 (Aut, Win, Spr, Sum)

2022-23

- Machine Learning and Causal Inference: ECON 293 (Spr)
- Machine Learning and Causal Inference: MGTECON 634 (Spr)
- Research Fellows Practicum: GSBGEN 697 (Aut, Win, Spr, Sum)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Yan Zhou

Postdoctoral Faculty Sponsor

José Ramón Enríquez, Aleksei Samkov, Ellie Tyger

Doctoral Dissertation Advisor (AC)

Herman Brunborg, Tianyu Du, Zoe Ji

Publications

PUBLICATIONS

- **The Surrogate Index: Combining Short-Term Proxies to Estimate Long-Term Treatment Effects More Rapidly and Precisely** *REVIEW OF ECONOMIC STUDIES*
Athey, S., Chetty, R., Imbens, G. W., Kang, H.
2025
- **Does Q&A Boost Engagement? Health Messaging Experiments in the United States and Ghana** *MANAGEMENT SCIENCE*
Kirgios, E. L., Athey, S., Duckworth, A. L., Karlan, D., Luca, M., Milkman, K. L., Offer-Westort, M.
2025
- **Estimating wage disparities using foundation models.** *Proceedings of the National Academy of Sciences of the United States of America*
Vafa, K., Athey, S., Blei, D. M.
2025; 122 (22): e2427298122
- **Targeted Treatment Assignment Using Data from Randomized Experiments with Noncompliance**
Athey, S., Inoue, K., Tsugawa, Y.
AMER ECONOMIC ASSOC.2025: 209-214
- **Machine learning who to nudge: Causal vs predictive targeting in a field experiment on student financial aid renewal** *JOURNAL OF ECONOMETRICS*
Athey, S., Keleher, N., Spiess, J.
2025; 249
- **Presidential Address: The Economist as Designer in the Innovation Process for Socially Impactful Digital Products** *AMERICAN ECONOMIC REVIEW*
Athey, S.
2025; 115 (4): 1059-1099
- **On synthetic difference-in-differences and related estimation methods in Stata** *STATA JOURNAL*
Clarke, D., Pailanir, D., Athey, S., Imbens, G.
2024; 24 (4): 557-598
- **Qini Curves for Multi-Armed Treatment Rules** *JOURNAL OF COMPUTATIONAL AND GRAPHICAL STATISTICS*
Sverdrup, E., Wu, H., Athey, S., Wager, S.
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- **The Year in Review: Economics at the Antitrust Division 2023-2024** *REVIEW OF INDUSTRIAL ORGANIZATION*
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Inoue, K., Athey, S., Baicker, K., Tsugawa, Y.
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- **Heterogeneous effects of Medicaid coverage on cardiovascular risk factors: secondary analysis of randomized controlled trial.** *BMJ (Clinical research ed.)*
Inoue, K., Athey, S., Baicker, K., Tsugawa, Y.
2024; 386: e079377
- **Policy Learning with Adaptively Collected Data** *MANAGEMENT SCIENCE*
Zhan, R., Ren, Z., Athey, S., Zhou, Z.
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- **Battling the coronavirus 'infodemic' among social media users in Kenya and Nigeria.** *Nature human behaviour*
Offer-Westort, M., Rosenzweig, L. R., Athey, S.
2024
- **Using Wasserstein Generative Adversarial Networks for the design of Monte Carlo simulations#** *JOURNAL OF ECONOMETRICS*
Athey, S., Imbens, G. W., Metzger, J., Munro, E.
2024; 240 (2)
- **Towards Costless Model Selection in Contextual Bandits: A Bias-Variance Perspective**
Krishnamurthy, S., Propp, A., Athey, S.
edited by Dasgupta, S., Mandt, S., Li, Y.
JMLR-JOURNAL MACHINE LEARNING RESEARCH.2024
- **Optimal Experimental Design for Staggered Rollouts** *MANAGEMENT SCIENCE*
Xiong, R., Athey, S., Bayati, M., Imbens, G.
2023
- **Can personalized digital counseling improve consumer search for modern contraceptive methods?** *Science advances*
Athey, S., Bergstrom, K., Hadad, V., Jamison, J. C., Ozler, B., Parisotto, L., Sama, J. D.
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- **Federated causal inference in heterogeneous observational data.** *Statistics in medicine*
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Athey, S., Bickel, P. J., Chen, A., Imbens, G. W., Pollmann, M.
2023
- **Machine-learning-based high-benefit approach versus conventional high-risk approach in blood pressure management.** *International journal of epidemiology*
Inoue, K., Athey, S., Tsugawa, Y.
2023
- **Digital public health interventions at scale: The impact of social media advertising on beliefs and outcomes related to COVID vaccines.** *Proceedings of the National Academy of Sciences of the United States of America*
Athey, S., Grabarz, K., Luca, M., Wernerfelt, N.
2023; 120 (5): e2208110120
- **Proportional Response: Contextual Bandits for Simple and Cumulative Regret Minimization**
Krishnamurthy, S., Zhan, R., Athey, S., Brunskill, E.
edited by Oh, A., Neumann, T., Globerson, A., Saenko, K., Hardt, M., Levine, S.
NEURAL INFORMATION PROCESSING SYSTEMS (NIPS).2023
- **Flexible and Efficient Contextual Bandits with Heterogeneous Treatment Effect Oracles**
Carranza, A., Krishnamurthy, S., Athey, S.
edited by Ruiz, F., Dy, J., VanDeMeent, J. W.
JMLR-JOURNAL MACHINE LEARNING RESEARCH.2023
- **Expanding capacity for vaccines against Covid-19 and future pandemics: a review of economic issues** *OXFORD REVIEW OF ECONOMIC POLICY*
Athey, S., Castillo, J., Chaudhuri, E., Kremer, M., Gomes, A., Snyder, C. M.
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- **Offline Multi-Action Policy Learning: Generalization and Optimization** *OPERATIONS RESEARCH*

- Zhou, Z., Athey, S., Wager, S.
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- **Uncovering interpretable potential confounders in electronic medical records.** *Nature communications*
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 - **Stable learning establishes some common ground between causal inference and machine learning** *NATURE MACHINE INTELLIGENCE*
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 - **Design-based analysis in Difference-In-Differences settings with staggered adoption** *JOURNAL OF ECONOMETRICS*
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 - **Counterfactual inference for consumer choice across many product categories (Jun, 10.1007/s11129-021-09241-2, 2021)** *QME-QUANTITATIVE MARKETING AND ECONOMICS*
Donnelly, R., Ruiz, F. J. R., Blei, D., Athey, S.
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 - **Synthetic Difference-in-Differences** *AMERICAN ECONOMIC REVIEW*
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 - **Matrix Completion Methods for Causal Panel Data Models** *JOURNAL OF THE AMERICAN STATISTICAL ASSOCIATION*
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- **Falling living standards during the COVID-19 crisis: Quantitative evidence from nine developing countries.** *Science advances*
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- **POLICY LEARNING WITH OBSERVATIONAL DATA** *ECONOMETRICA*
Athey, S., Wager, S.
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- **Off-Policy Evaluation via Adaptive Weighting with Data from Contextual Bandits**
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- **Ten Rules for Conducting Retrospective Pharmacoepidemiological Analyses: Example COVID-19 Study.** *Frontiers in pharmacology*
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- **Adapting to Misspecification in Contextual Bandits with Offline Regression Oracles**
Krishnamurthy, S., Hadad, V., Athey, S.
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- **Tractable contextual bandits beyond realizability**
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- **The Association Between Alpha-1 Adrenergic Receptor Antagonists and In-Hospital Mortality From COVID-19.** *Frontiers in medicine*
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- **Local Linear Forests** *JOURNAL OF COMPUTATIONAL AND GRAPHICAL STATISTICS*
Friedberg, R., Tibshirani, J., Athey, S., Wager, S.
2020
- **Peaches, lemons, and cookies: Designing auction markets with dispersed information** *GAMES AND ECONOMIC BEHAVIOR*
Abraham, I., Athey, S., Babaioff, M., Grubb, M. D.
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- **The Allocation of Decision Authority to Human and Artificial Intelligence**
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2020
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- **The Impact of Consumer Multi-homing on Advertising Markets and Media Competition** *MANAGEMENT SCIENCE*
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- **Stable Prediction across Unknown Environments**
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- **Learning in Games with Lossy Feedback**
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- **Estimation and Inference of Heterogeneous Treatment Effects using Random Forests** *JOURNAL OF THE AMERICAN STATISTICAL ASSOCIATION*
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- **Estimating Average Treatment Effects: Supplementary Analyses and Remaining Challenges** *AMERICAN ECONOMIC REVIEW*
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- **Structured Embedding Models for Grouped Data**
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- **A Measure of Robustness to Misspecification** *AMERICAN ECONOMIC REVIEW*
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- **Machine Learning and Causal Inference for Policy Evaluation**
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- **Dynamics of Open Source Movements** *JOURNAL OF ECONOMICS & MANAGEMENT STRATEGY*
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- **AN EFFICIENT DYNAMIC MECHANISM** *ECONOMETRICA*
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- **Designing efficient mechanisms for dynamic bilateral trading games** *119th Annual Meeting of the American-Economic-Association*
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AMER ECONOMIC ASSOC.2007: 131–36
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- **Organizational design: Decision rights and incentive contracts** *113th Annual Meeting of the American-Economics-Association*
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- **Information and competition in US forest service timber auctions** *JOURNAL OF POLITICAL ECONOMY*
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