Ravi Shroff

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Education

M.S., Applied Urban Science and Informatics, NYU 2014

Ph.D., Mathematics, UC San Diego 2011

B.S., Mathematics, Economics, University of Washington 2005

Academic Appointments

Associate Professor of Applied Statistics, NYU 2023 - Present

Assistant Professor of Applied Statistics, NYU 2017 - 2023

Steinhardt School of Culture, Education, and Human Development

Center for Urban Science and Progress (affiliated appointment)

Senior Research Scientist, NYU 2016 - 2017

Research Scientist, NYU 2014 - 2016

Center for Urban Science and Progress

Postdoctoral Fellow, The Australian National University 2011 - 2013

Mathematical Sciences Institute

Publications

Journal and Conference Publications

1. J. Jung, S. Corbett-Davies, J. Gaebler, R. Shroff, S. Goel. Measuring disparate impact in human and machine decisions. *Proceedings of the National Academy of Sciences*, Vol 123. (2026)

2. J. R. Pamplin II, K. Wheeler-Martin, A. Perry, Z. Mannes, N. Krawczyk, S. Crystal, D. S. Hasin, S. S. Martins, R. Shroff, M. Cerdá, D. B. Neill. Identifying demographic predictors of increased non-fatal opioid overdose risk among New York State Medicaid enrollees following the COVID-19 pandemic: an analysis of heterogeneous treatment effects. To appear in *Epidemiology*. (2026)

3. A. Martin, E. Miller, R. Gross, P. Morris-Perez, D. Shaw, L. Piccolo, J. Hill, M. Scott, M. Messito, C. Canfield, L. O'Connell, R. Sadler, A. Aviles, C. Weaver Krug, C. Kim, J. Gutierrez, R. Shroff, A. Mendelsohn. Economic hardships during COVID-19 and maternal mental health: Combining samples with low incomes across three cities. *Social Science & Medicine*, Vol 366. (2025)

4. J. Souto-Maior, R. Shroff. Differences in academic preparedness do not fully explain Black-White enrollment disparities in advanced high school coursework. *Sociological Science*, Vol 11, 138–163. (2024)

5. J. Orpella, G. Flick, M. F. Assaneo, R. Shroff, L. Pylkkänen, D. Poeppel, E. Jackson. Reactive Inhibitory Control Precedes Overt Stuttering Events. *Neurobiology of Language*, 1–22. (2024)

6. H.Warner, R. Shroff, A. Zuanazzi, R. Arenas, E. Jackson. Linguistic features of stuttering during spontaneous speech. *Journal of Fluency Disorders*, Vol 78, 106016. (2023)

7. S. Corbett-Davies, J. Gaebler, H. Nilforoshan, R. Shroff, S. Goel. The Measure and Mismeasure of Fairness. *Journal of Machine Learning Research*, Vol 24 (No. 312), 1–117. (2023)

8. R. Shroff, K. Vamvourellis. Pretrial release judgments and decision fatigue. *Judgment and Decision Making*, Vol 17 (No. 6), 1176–1207. (2022)

9. H. Nilforoshan, J. Gaebler, R. Shroff, S. Goel. Causal Conceptions of Fairness and Their Consequences. *International Conference on Machine Learning (ICML 2022)*. (2022)

10. J. Gaebler, W. Cai, G. Basse, R. Shroff, S. Goel, J. Hill. A Causal Framework for Observational Studies of Discrimination. *Statistics and Public Policy*, Vol 9 (No. 1), 26–48. (2022)

11. A. Chohlas-Wood, M. Gerchick, S. Goel, A. Huq, A. Shoemaker, R. Shroff, K. Yao. Identifying and Measuring Excessive and Discriminatory Policing. *University of Chicago Law Review*, Vol 89 (No. 2), 441–475. (2022)

12. E. Pierson, C. Simoiu, J. Overgoor, S. Corbett-Davies, D. Jenson, A. Shoemaker, V. Ramachandran, P. Barghouty, C. Phillips, R. Shroff, S. Goel. A Large-Scale Analysis of Racial Disparities in Police Stops Across the United States. *Nature Human Behavior*, Vol 4 (No. 5), 736–745. (2020)

13. J. Jung, C. Concannon, R. Shroff, S. Goel, D. Goldstein. Simple Rules to Guide Expert Classifications. *Journal of the Royal Statistical Society: Series A*, Vol 183 (No. 3), 771–800. (2020)

14. J. Jung, R. Shroff, A. Feller, S. Goel. Bayesian Sensitivity Analysis for Offline Policy Evaluation. *Conference on ArtificiaI Intelligence, Ethics, and Society (AIES 2020)*. (2020)

15. R. Shroff. Statistical Tests to Audit Investigative Stops. *Ohio State Journal of Criminal Law*, Vol 15 (No. 2), 565–571. (2018)

16. R. Shroff. Predictive Analytics for City Agencies: Lessons from Children's Services. *Big Data*, Vol 5 (No. 3), 189–196. (2017)

17. S. Goel, M. Perelman, R. Shroff, D. Sklansky. Combatting Police Discrimination in the Age of Big Data. *New Criminal Law Review*, Vol 20 (No. 2), 181–232. (2017)

18. J. Jung, C. Concannon, R. Shroff, S. Goel, D. Goldstein. Creating Simple Rules for Complex Decisions. *Harvard Business Review OnPoint (Fall)*, 20–21. (2017)

19. S. Goel, J. Rao, R. Shroff. Precinct or Prejudice? Understanding Racial Disparities in New York City's Stop-and-Frisk Policy. *Annals of Applied Statistics*, Vol 10 (No. 1), 365–394. (2016)

20. S. Goel, J. Rao, R. Shroff. Personalized Risk Assessments in the Criminal Justice System. *The American Economic Review (Papers and Proceedings)*, Vol 106 (No. 5), 119–123. (2016)

21. R. Wang, R. Shroff, Y. Zha, S. Seshan, M. Veloso. Indoor Trajectory Identification: Snapping With Uncertainty. *Proceedings of IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2015)*. (2015)

22. P. Ebenfelt, R. Shroff. Partial Rigidity for CR Embeddings of Real Hypersurfaces into Hyperquadrics with Small Signature Difference. *Comm. Anal. Geom*, Vol 23 (No. 1), 159–190. (2015)

23. S. Duong, J. Lebl, A. Minor, R. Shroff, Y. Zhang. CR Singular Images of Generic Submanifolds Under Holomorphic Maps. *Arkiv för Matematik*, Vol 52 (No.2), 301–327. (2014)

Book Chapters

1. A. Chohlas-Wood, M. Gerchick, S. Goel, A. Huq, A. Shoemaker, R. Shroff, K. Yao. Empirical Approaches to Identify Systemic Discrimination in Policing. To appear in *Inequality Reader*. (2023+)

2. S. Goel, R. Shroff, J. Skeem, C. Slobogin. The Accuracy, Equity, and Jurisprudence of Criminal Risk Assessment. *Research Handbook on Big Data Law*. Edward Elgar Publishing, 9–28. (2021)

Technical Reports

1. A. Chohlas-Wood, S. Goel, A. Shoemaker, R. Shroff. An Analysis of the Metropolitan Nashville Police Department's Traffic Stop Practices. Available here. (2018)

Awards & Fellowships

ICML 2022 Outstanding Paper Award	2022
Data & Society Research Institute Fellowship	2016-2017
Center for Urban Science and Progress Inaugural Fellowship, NYU	2013-2014
Summer Graduate Teaching Fellowship, University of California, San Diego	2010
Outstanding Teaching Assistant Award, University of California, San Diego	2010

Professional Activities

Reviewer for: *Journal of Policy Analysis and Management*, *Behavioral Sciences and the Law*, *ACM Transactions on Management Information Systems*, *Management Science*, *Science Advances*, *Journal of Empirical Legal Studies*, *Nature Neuroscience*, *Nature Human Behavior*, *Nature Computational Science*, *Behavioral Science and Policy*, *Journal of Quantitative Criminology*, *Educational Researcher*, *FAccT 2022*, *FAT* 2020*, *FAT* 2019*.

Conferences and Invited Sessions Organized:

"Data & Ethics: In the Public Sector for the Public Good?" (co-organizer, NYU 2019)

CMStatistics 2023, 2019, 2018 (session organizer)

Invited member:

Predictive Analytics Advisory Group
New York City's Administration for Children's Services (2018 - Present)

SMART Tool Advisory Committee
New York City's Mayor's Office of Criminal Justice (2020 - 2021)

Data Analytics Working Group
Center for the Advancement of Public Integrity, Columbia University (2016)

Expert Consultant, ACLU of Illinois (2016 - 2018)