

Ravi Shroff

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Employment

New York University

Steinhardt School of Culture, Education, and Human Development

Assistant Professor of Applied Statistics, 2017 - present

Department of Applied Statistics, Social Science, and Humanities

Center for Urban Science and Progress

Assistant Professor of Urban Informatics, 2017 - present

Senior Research Scientist, 2016 - 2017

Research Scientist, 2014 - 2016

The Australian National University

Mathematical Sciences Institute

Postdoctoral Fellow, 2011 - 2013

Other Positions and Affiliations

Stanford Computational Policy Lab: Affiliated Researcher

ACLU of Illinois: Expert (2016 - present)

New York City Administration for Children's Services: Consultant (2016-2017)

Stanford University: Visiting scholar, (Jan-Mar 2016, Sept-Dec 2017)

Education

M.S. Applied Urban Science and Informatics, New York University, July 2014.

Ph.D. Mathematics, University of California, San Diego, June 2011.

Dissertation: Rigidity Properties of CR Embeddings into Hyperquadrics.

M.S. Mathematics, University of California, San Diego, June 2009.

B.S. Mathematics (with distinction), Economics, University of Washington, June 2005.

Publications

- J. Jung, R. Shroff, A. Feller, S. Goel, “Algorithmic Decision Making in the Presence of Unmeasured Confounding.” (2018). Working Paper.
- J. Jung, C. Concannon, R. Shroff, S. Goel, D. Goldstein, “Simple Rules for Complex Decisions.” (2017). Under Review.
- R. Shroff, “Statistical Tests to Audit Investigative Stops.” (2018). To appear in *Ohio State Journal of Criminal Law*, Vol 15 (No. 2).
- R. Shroff, “Predictive Analytics for City Agencies: Lessons from Children’s Services.” (2017). In *Big Data*, Vol 5 (No. 3).
- S. Goel, M. Perelman, R. Shroff, D. Sklansky, “Combatting Police Discrimination in the Age of Big Data.” (2017). In *New Criminal Law Review*, Vol 20 (No. 2), 181-232.
- S. Goel, J. Rao, R. Shroff, “Personalized Risk Assessments in the Criminal Justice System.” (2016). In *The American Economic Review (Papers and Proceedings)*, Vol 106 (No. 5), 119-123.
- S. Goel, J. Rao, R. Shroff, “Precinct or Prejudice? Understanding Racial Disparities in New York City’s Stop-and-Frisk Policy.” (2016). In *Annals of Applied Statistics*, Vol 10 (No. 1), 365-394.
- R. Wang, **R. Shroff**, Y. Zha, S. Seshan, M. Veloso, “Indoor Trajectory Identification: Snapping With Uncertainty.” (2015). *Proceedings of IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2015)*.
- P. Ebenfelt, R. Shroff, “Partial rigidity for CR embeddings of real hypersurfaces into hyperquadrics with small signature difference.” (2015). In *Comm. Anal. Geom*, Vol 23 (No. 1), 159-190.
- S. Duong, J. Lebl, A. Minor, R. Shroff, Y. Zhang, “CR singular images of generic submanifolds under holomorphic maps.” (2014). In *Arkiv för Matematik*, **52**, no.2, 301-327.

Grants

- Knight Foundation - News Challenge on Data. “Law, Order, and Algorithms: Making Sense of 100 Million Highway Patrol Stops.” (Team member). \$310,000.

Honors, Awards, & Fellowships

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

Selected Invited Talks

Data for Good speaker series, April 2018, Columbia University

Big Data and Criminal Justice Round Table, Sept. 2017, The Ohio State University

“Data Tales from Industry” panel, June 2017, ISBIS 2017

Lunch Seminar, Mar. 2017, Crime Lab New York

Risk Assessment Tools, Jan. 2017, New York City Bar Association - Civil Rights Committee

Spotlight session, Nov. 2016, Fairness, Accountability, and Transparency in ML, New York University.

CLIP colloquium, Oct. 2016, University of Maryland.

Algorithmic bias panel, Oct. 2016, Justice Codes Symposium, John Jay College.

Lunch Seminar, Oct. 2016, Center for Data Science, NYU.

Big Data, Machine Learning, and Criminology panel, Nov. 2015, Annual meeting of the American Society of Criminology, Washington D.C.

“Firestarter” talk, Nov. 2015, Data & Civil Rights Workshop, Washington D.C.

Tea Talk, Oct. 2014, Microsoft Research, New York City.

Differential Geometry Seminar, March 2012, Australian National University.

Analysis Seminar, May 2011, UC Irvine.

Complex Analysis and Geometry Seminar, Dec. 2010, Rutgers University.

Emerging Applications of Complexity for CR Mappings, Fall 2010, American Institute of Mathematics.

Other Professional Service

Invited member, Predictive Analytics Advisory Group, New York City’s Administration for Children’s Services (ongoing).

Invited member, Data Analytics Working Group, Center for the Advancement of Public Integrity (2016).

Invited participant, Innovations for Urban Security and Policing, LSE Cities (Nov. 2015).

Reviewer, Journal of Policy Analysis and Management

Teaching Experience

New York University, New York City

Statistical Mysteries and How to Solve Them, Spring 2018

Data and Algorithms in the Criminal Justice System, Spring 2018

Machine Learning for Cities, Spring 2016

Science of Cities research seminar, Summer 2015

Urban Science Intensive I, Spring 2015

Capstone Project Supervisor, 2015-2017

The Australian National University, Canberra

Calculus, Autumn 2012

University of California, San Diego

Multivariable Calculus, Summer 2010

Teaching Assistant, Fall 2006 to Spring 2011.

Skills and Languages

Computational Skills: R, Python, SQL.

Languages: English (fluent). Portuguese (intermediate).

References

Available on request.