

Eaman Jahani

MIT Institute for Data, Systems, and Society
MIT Center for Statistics and Data Science

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Research Interests

I am interested in micro-level processes and structural factors such as information sharing in social networks or institutional settings that exacerbate existing inequalities. To this end, I use computational techniques and causal inference in networks, develop new network structure models and design online lab experiments to study how networks affect inequality.

Areas of Specialisation

Statistics, Network Science, Social Networks, Experiment Design, Causal Inference

Professional Experience

- 2020-Present Facebook, Boston
Consulting Researcher, Core Data Science
January 2020 - Present
- 2011-2015 Google, New York
Software Engineer, AdWords
July 2011 - November 2014
- 2011-2011 Microsoft Research, Redmond
Research Intern, Databases
May 2011 - July 2011

Education

Massachusetts Institute of Technology, Cambridge
PhD Candidate at Institute for Data, Systems and Society, *PhD in Social and Engineering Systems*
PhD Candidate at Statistics and Data Science Center, *Interdisciplinary PhD in Statistics*
Dissertation: Network Effects on Outcomes and Unequal Distribution of Resources
Advisors: Alex 'Sandy' Pentland, Dean Eckles
September 2015 - Present

University Of Michigan, Ann Arbor
MSc in Computer Science
September 2009 - July 2011

Research

Working Papers

- *Structural Determinants of Unequal Diffusion in Networks: The case of Brokerage*
Eaman Jahani, Dean Eckles, Alex “Sandy” Pentland
- *Diversity-Bandwidth Matching: The Prevalence of Strong and Long-Range ties in Social Networks*
Eaman Jahani, Mike Bailey, Annie Franco, Dean Eckles
- *Experimental Study of Network Effects on Unequal Outcomes*
Eaman Jahani, Alex “Sandy” Pentland, Dean Eckles
- *Social Ties and the Debunking False Claims in Messaging Apps*
Irene Pasquetto, **Eaman Jahani**, Matthew Baum

Under Review

- *Exposure to Common Enemies can Increase Political Polarization: Evidence from an Experiment with Automated Partisans*
Eaman Jahani, Natalie Gallagher, Friedolin Merhout, Nicolo Cavalli, Douglas Guilbeault, Yan Leng, Christopher A. Bail

Publication (refereed)

- Xiaowen Dong*, Alfredo J. Morales*, **Eaman Jahani***, Esteban Moro, Bruno Lepri, Burcin Bozkaya, Carlos Sarraute, Yaneer Bar-Yam, Alex “Sandy” Pentland, *Segregated Interactions in Urban and Online Spaces*, EPJ Data Science, 2020
- Matthew J. Salganik in Mass Collaboration with III Authors, *Measuring the predictability of life outcomes with a scientific mass collaboration*, Proceedings of the National Academy of Sciences, 2020
- Daniel E Rigobon, **Eaman Jahani**, Yoshihiko Suhara, Khaled AlGhoneim, Abdulaziz Alghunaim, Abdullah Almaatouq, *Winning Models for Grade Point Average, Grit, and Lay-off in the Fragile Families Challenge*, Socius: Sociological Research for a Dynamic World, 2019
- **Eaman Jahani**, Peter M. Krafft, Yoshihiko Suhara, Esteban Moro, Alex “Sandy” Pentland, *Scam Coins, S*** Posters, and the Search for the Next BitcoinTM: Collective Sensemaking in Cryptocurrency Discussions*, Proceedings of the ACM on Human-Computer Interaction -CSCW, 2018
- **Eaman Jahani**, Pål Sundsøy, Johannes Bjelland, Linus Bengtsson, Alex “Sandy” Pentland, Yves-Alexandre de Montjoye, *Improving official statistics in emerging markets using machine learning and mobile phone data*, EPJ Data Science, 2017

- **Eaman Jahani**, Michael J. Cafarella, Christopher Ré. *Automatic Optimization for MapReduce Programs*, VLDB, 2011.

Publication (lightly refereed)

- **Eaman Jahani**, Guillaume Saint-Jacques, Pål Sundsøy, Johannes Bjelland, Esteban Moro, Alex “Sandy” Pentland, *Differential Network Effects on Economic Outcomes: A Structural Perspective*, International Conference on Social Informatics, 2017
- Pål Sundsøy, Johannes Bjelland, Bjørn-Atle Reme, Asif M Iqbal, **Eaman Jahani**, *Deep learning applied to mobile phone data for individual income classification*, International Conference on Artificial Intelligence: Technologies and Applications, 2016
- **Eaman Jahani***, Xiaowen Dong*, Alfredo Morales-Guzman, Burçin Bozkaya, Alex Pentland, *Purchase patterns, socioeconomic status, and political inclination*, World Bank Economic Review, 2016

Honors and Awards

NSF Graduate Research Fellowship 2015-2018

Software Engineering Promotion, Google 2013

Dean’s List and James B. Angell Scholar, University of Michigan 2009

Recent Talks

- *Network Structure of Unequal Diffusion*, International Conference of Computational Social Science, Boston, 2020
- *The Role of Social Ties in Debunking False Claims*, International Conference of Computational Social Science, Boston, 2020
- *Collective Sensemaking in Online Groups: The case of Cryptocurrency Discussions*, Sunbelt Conference, Montreal, 2019
- *ScamCoins, S*** Posters, and the Search for the Next BitcoinTM: Collective Sensemaking in Cryptocurrency Discussions*, CSCW Conference, New York, 2018
- *Differential Network Effects on Economic Outcomes: A Structural Perspective*, Network Science Conference, Paris, 2018
- *Differential Network Effects on Economic Outcomes: A Structural Perspective*, International Conference of Computational Social Science, Cologne, 2017
- *Bubbles and Network Structure: a study in cryptocurrencies*, International Conference of Computational Social Science, Helsinki, 2015

Service

Organizing

- *Summer Institute for Computational Social Science, Partner Site*, Boston, 2019

Reviewing

IC2S2 (2020), ICIS (2018), Netmob (2016)

Technical Skills

R, Python, C++, C, Java, UNIX shell scripting, SQL, Presto, Spark, PHP