

Yuan Yuan

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EMPLOYMENT HISTORY

Purdue University

Assistant Professor of Management

West Lafayette, IN, USA

August 2021 - Present

EDUCATION

Massachusetts Institute of Technology

PhD, Institute for Data, Systems, and Society

Cambridge, MA, USA

Sept 2016 - August 2021

- Interdisciplinary Ph.D. program between data science and social science
- Dual Ph.D. in *Statistics*

Tsinghua University

BEng, Computer Science; BA, Economics (2nd Major)

Beijing, China

Sept 2012 - June 2016

- Graduation with honors

PUBLICATIONS AND MANUSCRIPTS

- [4] **Yuan Yuan**, Tracy Xiao Liu, Chenhao Tan, Qian Chen, Alex ‘Sandy’ Pentland, and Jie Tang, “*Gift contagion in online groups: Evidence from WeChat red packets.*” Minor Revision, *Management Science*.
- [3] **Yuan Yuan**, Kristen Altenburger, and Farshad Kooti, “*Causal Network Motifs: Identifying Heterogeneous Spillover Effects in A/B Tests*”, the Web Conference (WWW), 2021.
- [2] **Yuan Yuan**, Ahmad Alabdulkareem, and Alex ‘Sandy’ Pentland. “*An interpretable approach for social network formation among heterogeneous agents.*” *Nature Communications* (if=14.92), 2018.
- [1] **Yuan Yuan**, Sihong Xie, Chun-Ta Lu, Jie Tang, and Philip S. Yu, “*Interpretable and effective opinion spam detection via temporal pattern mining across websites.*” *IEEE International Conference on Big Data*, 2016.

WORKING PAPERS

- [1] **Yuan Yuan**, Christos Nicolaides, Dean Eckles, and Alex ‘Sandy’ Pentland, “*Who motivates more workouts: Friends or strangers?*” working paper.

WORK EXPERIENCE

Core Data Science Group, Facebook Research

Menlo Park, CA, USA

- Mentor: Dr. Farshad Kooti
- Employed causal inference and machine learning to understand how to promote social interactions and solidarity in online social networks.
- Explored methods for conducting causal inference on large-scale social networks.

INVITED TALKS & LECTURES

- [5] “*Causal Network Motifs: Identifying Heterogeneous Spillover Effects in A/B Tests*”, invited talk, Oxford Mathematical Institute, Nov 2020.
- [4] “*Causal identifications in observational studies*”, invited talk, Conference on Big Data and Social Computing, Aug 2020.
- [3] “*Identifying gift contagion in online groups*, ” guest lecturer for Behavioral Economics, Tsinghua University (remotely), Mar 2020.
- [2] “*Predicting economic growth by social diversity*, ” invited talk, International Conference on Social Computing, Aug 2019.
- [1] “*Trading off between homophily and social exchange for social network formation*, ” invited talk, Beijing Normal University, Jan 2019.

CONFERENCE PRESENTATIONS

- [16] “*Prosocial Incentives and Workouts: Evidence from a Massive Online Experiment*” Conference on Digital Experimentation (CODE), Boston, Nov 2020.
- [15] “*Causal Network Motifs: Identifying Heterogeneous Spillover Effects in A/B Tests*” Conference on Digital Experimentation (CODE), Boston, Nov 2020.
- [14] “*Trade-off between social exchange and homophily in social network formation?*” International Conference on Network Science (NetSci), Machine Learning Workshop, Rome, Sept 2020.
- [13] “*Who motivates more workouts: Friends or strangers?*” International Conference on Network Science (NetSci), Rome, Sept 2020.
- [12] “*Who motivates more workouts: Friends or strangers?*”, International Conference on Computational Social Science (IC2S2), Boston, July 2020.
- [11] “*The contagion of online gift giving*,” INFORMS Annual Meeting, Seattle, Oct 2019.
- [10] “*Does prosocial contagion increase inequality? A large-scale online field experiment*,” International Conference on Computational Social Science (IC2S2), Amsterdam, July 2019.
- [9] “*A large-scale natural experiment of indirect reciprocity*,” Conference on Digital Experimentation (CODE), Boston, Oct 2018.

- [8] “*A large-scale natural experiment of indirect reciprocity*,” Advances in Field Experiments (AFE), Boston, Oct 2018.
- [7] “*Online red packets: A large-scale empirical study of gift giving on WeChat*,” International Conference on Computational Social Science (IC2S2), Evanston, July 2018.
- [6] “*An interpretable approach for social network formation among heterogeneous agents*,” International Conference on Computational Social Science (IC2S2), Evanston, July 2018.
- [5] “*Trade-off between social exchange and homophily in social network formation*,” International Conference on Network Science (NetSci), Paris, June 2018.
- [4] “*A large-scale empirical study of gift giving on WeChat*,” Annual Conference on Network Science and Economics (NetSci Econ), Nashville, Apr 2018.
- [3] “*Trade-off between social exchange and homophily in social network formation*,” Annual Conference on Network Science and Economics (NetSci Econ), Nashville, Apr 2018.
- [2] “*Social network formation based on endowment exchange. and Social Representation*,” Conference on Complex Systems (CCS), Cancún, Oct 2017.
- [1] “*Interpretable and effective opinion spam detection via temporal pattern mining across websites*,” IEEE International Conference on Big Data (BigData), Washington DC, Dec 2016.

PROFESSIONAL SERVICES

Technical Program Committee: Conference on Digital Experimentation (CODE), Boston, 2019 & 2020.

Organizer: Summer Institute in Computational Social Science, Beijing, 2021

Session chair: CODE’2019, IC2S2’2020.

Reviewer: Management Science, MIS Quarterly, ACM Transactions on Knowledge Discovery from Data, IEEE Transactions on Big Data, Misinformation Review, CODE’19, IC2S2’20.

MEDIA COVERAGE

- [2] “*WeChat is running a natural experiment in human generosity*,” MIT Technology Review, 2019.
- [1] “*Model helps explain how social networks form*,” PNAS Journal Club, 2018.

SELECTED AWARDS & GRANTS

Travel Grant for International Conference on Network Science	2020
Research Grant (\$5,000) from Russel Sage Foundation (co-PI)	2019
Participant in Summer Institute in Computational Social Science, Princeton University	2019
Travel Grant for Annual Conference on Network Science and Economics	2018
College Graduate Excellence Award, Tsinghua University	2016
China Computer Federation Outstanding Undergraduate Award	2015
Chinese National Scholarship	2014