Yuan Yuan

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EMPLOYMENT HISTORY

Purdue University   **West Lafayette, IN, USA**
Assistant Professor in Management   *August 2021 - Present*

INDUSTRY EXPERIENCE

Microsoft Inc.   **Redmond, WA, USA**
Visiting Research Scientist (part-time)   *August 2022 - Present*

Core Data Science Group, Facebook Research   **Menlo Park, CA, USA**
Research Intern   *May 2020 - August 2020*

EDUCATION

Massachusetts Institute of Technology   **Cambridge, MA, USA**
PhD, Institute for Data, Systems, and Society   *Sept 2016 - August 2021*
- Interdisciplinary Ph.D. program between data science and social science
- Dual Ph.D. in *Statistics*

Tsinghua University   **Beijing, China**
BEng, Computer Science; BA, Economics (2nd Major)   *Sept 2012 - June 2016*
- Graduation with honors

WORKING PAPERS

[4] **Yuan Yuan** and Kristen Altenburger, *"A two-part machine learning approach to characterizing network interference in A/B testing"*, under review.

[3] Shan Huang*, Chen Wang*, **Yuan Yuan***, Jinglong Zhao*, Penglei Zhao, *"Estimating effects of long term treatments"*, under review.

[2] **Yuan Yuan**, Christos Nicolaides, Alex Pentland, and Dean Eckles "*Promoting physical activity through prosocial incentives on mobile platforms*", under review.

[1] **Yuan Yuan**, Eaman Jahani, Shengjia Zhao, Yong-Yeol Ahn, and Alex Pentland "*Mobility network reveals the impact of spatial vaccination heterogeneity on COVID-19*", under review.

PUBLICATIONS

Journal Articles

[3] **Yuan Yuan**, Tracy Xiao Liu, Chenhao Tan, Qian Chen, Alex 'Sandy' Pentland, and Jie Tang, "*Gift contagion in online groups: Evidence from Virtual red packets,*" accepted at *Management Science*.

[2] Ding Lyu, **Yuan Yuan** (corr author), Lin Wang, Xiaofan Wang, Alex Pentland, "*Investigating and modeling the dynamics of long ties*", *Communications Physics (Nature Portfolio)*, 2022.

[1] **Yuan Yuan**, Ahmad Alabdulkareem, and Alex 'Sandy' Pentland. "*An interpretable approach for social network formation among heterogeneous agents.*" *Nature Communications*, 2018.

Refereed Conference Proceedings

[3] Yongkang Guo, **Yuan Yuan**, Jinshan Zhang, Yuqing Kong, Zhihua Zhou, Zheng Cai, "Near-Optimal Experimental Design Under the Budget Constraint in Online Platforms", accepted at the Web Conference (WWW), 2023.

[2] **Yuan Yuan**, Kristen Altenburger, and Farshad Kooti, "*Causal Network Motifs: Identifying Heterogeneous Spillover Effects in A/B Tests*", the Web Conference (WWW), 2021.

[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.

INVITED TALKS & LECTURES

[12] "*A two-part machine learning approach to characterizing network interference in A/B testing*", invited talk, Boston University, Sept 2022.

[11] "*Mobility network reveals the impact of spatial vaccination heterogeneity on COVID-19*", invited talk, MIT Connection Science, May 2022.

[10] "*A Promoting physical activity through prosocial incentives on mobile platforms*", invited talk, MIT IDE Annual Meeting, May 2022.

[9] "*Identifying Heterogeneous Spillover Effects in Networked Experiments*", invited talk, Conference on Web and Internet Economics, Dec 2021.

[8] "*Promoting physical activity through prosocial incentives on mobile platforms*", invited talk, MIT Center for Real Estate, Nov 2021.

[7] "*Machine Learning for Social Networks*", invited talk, SICSS Hong Kong, June 2021.

[6] "*Causal Inference on Social Networks*", invited talk, Microsoft Research, April 2021.

[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

2023: ACIC
2022: IC2S2, ACIC, NetSci, INFORMS, ISMS, AFE
2021: WebConf, Informs, Informs Healthcare, CIST, WITS
2020: NetSci, IC2S2, CODE
2019: IC2S2, Informs
2018: NetSci-Econ, AFE, NetSci, IC2S2, CODE
2017-: BigData, CCS

PROFESSIONAL SERVICES

Organizer: SICSS Beijing 2021, WINE Experimentation Workshop 2021.
Technical Program Committee: MIT Conference on Digital Experimentation, 2019-2021.
Reviewer: NSF Proposal, Journal of the American Statistical Association, Management Science, MIS Quarterly, Information Systems Research, ACM Transactions on Knowledge Discovery from Data, IEEE Transactions on Big Data, HBS Misinformation Review, IC2S2, WITS, CIST, WINE, ACIC, INFORMS

TEACHING EXPERIENCE

Analytics Experiential Project (new course)	*2023 Spring*
Introduction to Management Information Systems	*2022 Spring*
Doctoral Research Seminar: Topics in Social Networks (new course)	*2021 Fall*