

Tianshu Sun

Contact Information

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Academic Position

- 2016 - Present: Assistant Professor of Data Sciences and Operations,
Marshall School of Business, University of Southern California.

Education

- 2011 - 2016 : Ph.D. (Information Systems), Smith School of Business,
University of Maryland.

Dissertation: “Engineering Digital Sharing Platforms to Create Social Contagion:
Evidence from Three Large Scale Randomized Field Experiments”,
Committee: Siva Viswanathan (Chair), Gordon (Guodong) Gao, Ginger Zhe Jin,
Il-Horn Hann, David Godes

Minor in Economics (15 Courses in Game Theory and Econometrics)

- 2009 - 2011 : Master of Science (Physics), University of Maryland.
(Pass all PhD Qualify Exams in 2009, GPA 4.0/4.0, Flagship Fellowship 2009-11)
- 2005 - 2009 : Bachelor of Science (Physics), Nanjing University.

Research Interest

- **Substantive:** Big Data, Business Analytics, Online Social Sharing, Offline Behaviors,
Mobile Technology, Internet of Things, Public Health, Pro-social Behavior
- **Methodology:** Randomized Field Experiment, Econometrics, Machine Learning,
Structural Econometric Model, Game Theory, Social Network Analysis

Research

I. Use Digital Interventions to Influence Online Information Sharing

Tianshu Sun, Siva Viswanathan and Elena Zheleva (2014) “Creating Social Contagion
through Firm Mediated Message Design: Evidence from a Randomized Field Experiment”,
Under Review

-- Best Dissertation Proposal (Runner-up), WITS 2015; Best Paper (Finalist), CSWIM 2015; Best Student Paper (3rd Place), INFORMS Service Science Society 2014; Winner, Marketing Science Institute (MSI) Research Competition 2014

Tianshu Sun, Guodong (Gordon) Gao and Ginger Zhe Jin (2015), "Mobile Messaging for Offline Social Interactions: A Large Field Experiment", NBER Working Paper #21704, Under 2nd Round Review, *Management Science*

-- Best Paper, CIST 2015; Best Paper (Honorable Mentions), INFORMS Doing Good with Good OR 2015; Best Student Paper (Finalist), WHITE 2015

Tianshu Sun, Siva Viswanathan and Elena Zheleva (2015) "Monetize Sharing Traffic through Incentive Design: A Randomized Field Experiment", Working Paper, In Preparation for Submission

JaeHwuen Jung, Ravi Bapna, Joe Golden and Tianshu Sun (2016) "Altruism Pays! Towards Optimal Call-to-Action for Online Referral: A Randomized Field Experiment", *Under Review*

-- Best Paper (Finalist), ICIS 2016; Best Paper, ICIS E-Business Track 2016

II. Use Digital Interventions to Influence Offline Behaviors

Tianshu Sun, Susan Feng Lu and Ginger Zhe Jin (2016), "Solving Shortage in a Priceless Market: Evidence from Blood Donation", *Journal of Health Economics*, 48(2016):149-165.

-- Featured on Nobel Prize Laureate Al Roth's blog and in NBER News; Winning Proposal, Institute for New Economic Thinking (INET) & Soros Foundation, 2013

Tianshu Sun, Lanfei Shi, Siva Viswanathan and Elena Zheleva (2016) "Motivating Mobile App Adoption: Evidence from a Randomized Field Experiment", Working Paper, In Preparation for Submission

"Uncovering Offline Conversion Funnel with Big Data: the case of Smart WiFi tracking in Retailing Industry", with Xing Lan and Jason Duan, Work in progress

Work Experience (as a Data Scientist)

- 2013 – 2016 : Data Scientist, LivingSocial Inc., Washington, DC
- 2015 – Present : Data Science Consultant, Zhima Tech, China
- 2015 – Present : Data Science Consultant, Collage.com, SF, CA
- 2013 – Present : Data Science Consultant, Ministry of Health, China
- 2012 : Algorithm Research Intern, Adobe Data Science Team, San Jose, CA

Business Analytics/ Data Science Skills

- Work as a data scientist across Fortune 500, Government Agency and Startups
- Data Infrastructure: Hadoop, MapReduce, Spark
- Programming: SQL/HiveQL/Python/C
- Statistic Software: R/STATA/WINBUG/Python(Numpy, Scipy, NetworkX)/Pajek
- Scientific Computing: Matlab/Mathematica/COMSOL/Origin

Awards and Grants

- **Conference Best Paper and Research Competition Winner**

Best Paper (Finalist), International Conferences on Information Systems (ICIS), 2016

Best Paper, ICIS 2016 E-Business Track

Best Paper, Conference on Information Systems and Technology (CIST), 2015

Best Dissertation Proposal (Runner up), Workshop on Information Technologies & Systems (WITS), 2015

Best Paper (Finalist), China Summer Workshop on Information Management, 2015

Best Paper (Honorable Mentions), INFORMS Doing Good with Good OR Paper Competition, 2015

Best Student Paper Finalist, Workshop on Health Information Technology and Economics (WHITE), 2015

Best Student Paper (3rd Place), INFORMS Service Science Society Best Paper, 2014

Winner, Marketing Science Institute (MSI) Research Competition (\$7500), 2014

- **Award and Honor**

Distinguished Dissertation Award (Nomination), University of Maryland

Best Dissertation Award, Smith School of Business, University of Maryland, 2016

Frank Paine Doctoral Award for Academic Achievement, University of Maryland (most prestigious award for PhD Students at the Smith School of Business), 2015

All S.T.A.R Fellowship, University of Maryland (\$10000, only recipient from the Business School), 2015

SSRN Top 10 Popular List in Marketing: Randomization & Information System, 2015

Fellow, ICIS Doctoral Consortium, 2015

Fellow, NBER Economics of Digitization Doctoral Consortium (travel grant), 2015

Fellow, Workshop on Health IT and Economics Doctoral Consortium, 2015

Fellow, INFORMS Marketing Science Doctoral Consortium, 2015

Fellow, CMU Structural Modeling Approaches to Research on Technology (SMART), 2014

Global Young Scholar, Institute for New Economic Thinking & Soros Foundation (with grant), 2013

UCLA-China Cross Disciplinary Scholarship in Science and Technology, 2008

National Scholarship of China (by Minister of Education; for top 1% students), 2008

“Chen-Ning Yang” Scholarship (for few distinguish Physics Majors in China), 2007

Champion, Chess Open, Jiangsu, China (National Athlete for Chess), 1996-2004

- **Grant and Funding**

Google Cloud Education Grant (\$5000), Google, 2016

Research Grant, CIBER and US Department of Education (\$4000), 2015

NSF Travel Award for “Drawing Causal Inference from Big Data” (\$1250), 2015

International Conference Student Support Award, University of Maryland, 2014

Jacob K. Goldhaber Travel Award, University of Maryland (\$600), 2014

Student Scholarship, Statistical Challenges in eCommerce Research (SCECR), 2015

University Flagship Fellowship, University of Maryland, 2009-2011

Dean’s Fellowship, Smith School of Business, University of Maryland, 2011-2016

Invited Talk

Facebook Research, 2016
Snapchat Research, 2016
NYU Stern, 2016
University of Minnesota, 2016
University of Rochester, 2016
University of California San Diego, 2016
Indiana University, 2016
Hong Kong University of Science and Technology (HKUST), 2016
City University of Hong Kong, 2016
University of Pittsburgh, 2016
Temple University, 2015
University of Connecticut, 2015
University of Southern California, 2015
Emory University, 2015
George Washington University, 2015
LivingSocial, 2013, 2014, 2015
Adobe, 2012

Conference/Workshop Papers and Presentations

1. Jaehwuen Jung, Ravi Bapna, Joe Golden and Tianshu Sun. “Does Care Lead to Share? Evidence from a Randomized Field Experiment on Call for Sharing”, *International Conference on Information Systems (ICIS 2016), Dublin, Ireland*
[\(Best Paper Finalist, ICIS 2016; Best Paper, ICIS E-business Track 2016\)](#)
2. Jaehwuen Jung, Ravi Bapna, Joe Golden and Tianshu Sun. “Altruism Pays! Towards Optimal Call-to-Action for Online Referral: A Randomized Field Experiment” *Workshop on Information Systems and Economics (WISE 2016), Dublin*
3. Tianshu Sun, Guodong (Gordon) Gao and Ginger Zhe Jin (2016) “Mobile Messaging for Offline Social Interactions: A Large Field Experiment”, *Stanford Digital Marketing Conference, Palo Alto, CA*
4. Tianshu Sun, Lanfei Shi, Siva Viswanathan and Elena Zheleva (2016) “Motivating Mobile App Adoption: Evidence from a Randomized Field Experiment”, *Conference on Information Systems and Technology (CIST 2016), Nashville, US*
5. Jaehwuen Jung, Ravi Bapna, Joe Golden and Tianshu Sun. “Altruism Pays! Towards Optimal Call-to-Action for Online Referral: A Randomized Field Experiment”, *Conference on Information Systems and Technology (CIST 2016), Nashville, US*
6. Tianshu Sun, Siva Viswanathan and Elena Zheleva (2016) “Monetize Sharing Traffic through Incentive Design: A Large Field Experiment”. *INFORMS Annual Meeting 2016, Nashville, US*
7. Tianshu Sun, Lanfei Shi, Siva Viswanathan and Elena Zheleva (2016) “Motivating Mobile App Adoption: Evidence from a Randomized Field Experiment”, *INFORMS Annual Meeting 2016, Nashville, US*
8. Jaehwuen Jung, Ravi Bapna, Joe Golden and Tianshu Sun. “Altruism Pays! Towards Optimal Call-to-Action for Online Referral: A Randomized Field Experiment”, *Conference on Digital Experimentation (CODE 2016), MIT, Boston*

9. Tianshu Sun, Guodong (Gordon) Gao and Ginger Zhe Jin (2016) “Motivating Group Donation: Evidence from a Large Field Experiment”, *Advances in Field Experiments Conference (AFE 2016), Chicago, IL*
10. Jaehwuen Jung, Ravi Bapna, Joe Golden and Tianshu Sun. (2016) “Optimal Call to Action for Referral Programs: Evidence from A Randomized Field Experiment”, *Symposium on Statistical Challenges in eCommerce Research (SCECR 2016), Greece*
11. Tianshu Sun, Lanfei Shi, Siva Viswanathan and Elena Zheleva (2016) “Motivating Mobile App Adoption: Evidence from a Randomized Field Experiment”, *Symposium on Statistical Challenges in eCommerce Research (SCECR 2016), Greece*
12. Tianshu Sun, "Engineering Digital Sharing Platforms to Create Social Contagion: Evidence from Three Large-scale Randomized Field Experiments" *Workshop on Information Technologies and Systems (WITS 2015), Dallas, US*
[\(Best Dissertation Proposal Award Finalist, WITS 2015\)](#)
13. Tianshu Sun, Siva Viswanathan and Elena Zheleva (2015) “Monetize Sharing Traffic through Incentive Design: A Randomized Field Experiment”. *Conference on Information Systems and Technology (CIST 2015), Philadelphia, US*
14. Tianshu Sun, Guodong (Gordon) Gao and Ginger Zhe Jin (2015) “Using Mobile Messaging to Leverage Social Connections for the Social Good: Evidence from Large-Scale Randomized Field Experiment”. *Conference on Information Systems and Technology (CIST 2015), Philadelphia, US* [\(Best Paper \(1st Place\), CIST 2015\)](#)
15. Tianshu Sun, Guodong (Gordon) Gao and Ginger Zhe Jin (2015) “Using Mobile Messaging to Leverage Social Connections for the Social Good: Evidence from Large-Scale Randomized Field Experiment”. *NYU Conference on Digital Big Data, Smart Device & Mobile Marketing Analytics (Big Data 2015), NYU, New York, US*
16. Tianshu Sun, Guodong (Gordon) Gao and Ginger Zhe Jin (2015) “Motivating Group Donation: Evidence from a Large Field Experiment” *Annual Workshop on Health IT and Economics (WHITE 2015), Washington, DC, US*
[\(Best Student Paper Award Finalist, WHITE 2015\)](#)
17. Tianshu Sun, Siva Viswanathan and Elena Zheleva (2015) “Monetize Sharing Traffic through Incentive Design: A Randomized Field Experiment”. *Conference on Digital Experimentation (CODE 2015), MIT, Boston, US*
18. Tianshu Sun, Guodong (Gordon) Gao and Ginger Zhe Jin (2015) “Using Mobile Messaging to Leverage Social Connections for the Social Good: Evidence from Large-Scale Randomized Field Experiment”. *Conference on Digital Experimentation (CODE 2015), MIT, Boston, US*
19. Tianshu Sun, Guodong (Gordon) Gao and Ginger Zhe Jin (2015) “Motivating Group Donation: Evidence from a Large Field Experiment”. *Workshop on Information in Networks (WIN 2015), NYU*
20. Tianshu Sun, Guodong (Gordon) Gao and Ginger Zhe Jin (2015) “Optimal Policy Design to Motivate Blood Donation: Evidence from a Randomized Field Experiment and a Structural Model”. *INFORMS Annual Meeting 2015, Philadelphia, US*
[\(Best Paper Finalist, INFORMS Doing Good with Good OR Paper Competition\)](#)
21. Tianshu Sun, Guodong (Gordon) Gao and Ginger Zhe Jin (2015) “Motivating Group Donation: Evidence from a Large Field Experiment”. *INFORMS Annual Meeting 2015,*

Philadelphia, US

22. Lanfei Shi, Tianshu Sun, Siva Viswanathan (2015) “The Diffusion and Business Value of User Generated Content On Social Media: Evidence From Twitter”. *INFORMS Annual Meeting 2015, Philadelphia, US*

23. Tianshu Sun, Siva Viswanathan and Elena Zheleva (2015) “Monetize Sharing Traffic through Incentive Design: A Randomized Field Experiment”. *INFORMS Annual Meeting 2015, Philadelphia, US*

24. Tianshu Sun, Siva Viswanathan and Elena Zheleva (2014) “Creating Social Contagion through Message Design: A Randomized Field Experiment”. *China Summer Workshop on Information Management (CSWIM 2015), Hefei, China* ([Best Paper Award Finalist, CSWIM 2015](#))

25. Tianshu Sun, Siva Viswanathan and Elena Zheleva (2015) “Monetize Sharing Traffic through Incentive Design: A Randomized Field Experiment”. *Symposium on Statistical Challenges in eCommerce Research (SCECR 2015), Addis Ababa, Ethiopia*

26. Tianshu Sun, Guodong (Gordon) Gao and Ginger Zhe Jin (2015) “Motivating Group Donation: Evidence from a Large Field Experiment”. *Symposium on Statistical Challenges in eCommerce Research (SCECR 2015), Addis Ababa, Ethiopia*

27. Tianshu Sun, Siva Viswanathan and Elena Zheleva (2015) “Monetize Sharing Traffic through Incentive Design: A Randomized Field Experiment”. *INFORMS Marketing Science Conference 2015, Baltimore, US*

28. Tianshu Sun, Guodong (Gordon) Gao and Ginger Zhe Jin (2015) “Motivating Group Donation: Evidence from a Large Field Experiment”. *Graduate Research Interaction Day, University of Maryland (GRID 2015), College Park, MD*

29. Tianshu Sun, Susan Feng Lu and Ginger Zhe Jin (2015) “Solving Shortage in Priceless Market: Evidence from Blood Donation”. *International Industrial Organization Conference (IIOC 2015), Boston, US*

30. Tianshu Sun, Guodong (Gordon) Gao and Ginger Zhe Jin (2015) “Motivating Group Donation: Evidence from a Large Field Experiment”. *International Industrial Organization Conference (IIOC 2015), Boston, US*

31. Tianshu Sun, Siva Viswanathan and Elena Zheleva (2014) “Creating Social Contagion through Message Design: A Randomized Field Experiment”. *Workshop on Information Systems and Economics (WISE 2014), Auckland, New Zealand*

32. Tianshu Sun, Siva Viswanathan and Elena Zheleva (2014) “Understanding the Effects of Message Design on Firm-Mediated Online Social Interactions: A Randomized Field Experiment”. *International Conference on Information Systems (ICIS 2014), Auckland, NZ*

33. Tianshu Sun, Siva Viswanathan and Elena Zheleva (2014) “Understanding the Effect of Message Design on Firm-Mediated Online Social Interactions: A Randomized Field Experiment”. *Conference on Information Systems and Technology (CIST 2014), SF, US*

34. Tianshu Sun, Siva Viswanathan and Elena Zheleva (2014) “Antecedences and Consequences of Multichannel Sharing Behaviors”. *INFORMS Annual Meeting 2014, SF, US*

35. Tianshu Sun, Siva Viswanathan and Elena Zheleva (2014) “Understanding the Effect of Message Design on Firm-Mediated Online Social Interactions: A Randomized Field Experiment”. *INFORMS Annual Meeting 2014, SF, US*

([INFORMS Service Science Best Student Paper, 3rd Place](#))

36. Tianshu Sun, Siva Viswanathan and Elena Zheleva (2014) “An Empirical Investigation

of Online Information Sharing Behaviors: Evidence from a Daily Deal Platform”.
INFORMS Marketing Science Conference 2014, Atlanta, US

37. Tianshu Sun, Siva Viswanathan and Elena Zheleva (2014) “Impact of Message Design on Online Interactions: An Empirical Investigation”. *International Conference on Electronic Commerce (ICEC 2014), Philadelphia, US*

Teaching

- Data Warehouse and Data Mining (University of Southern California, 2016, Course Evaluation: 4.8/5)
- Guest Lecture: DSO621 Research Forums (on Field Experiment), MKT613 Quantitative Marketing Models (on Field Experiment and Social Sharing), BMGT 808 Information Systems Economics (University of Maryland, 2015, on Field Experiments and Social Network Analysis)
- Modern Database Systems and Data Analytics (University of Maryland, 2014, 2015, Course Evaluation: 4.7/5)

Service

- Reviewer: MISQ (2013-2016), Information Systems Research (2016), Management Science (2015-2016), Journal of Economic and Management Strategy (2014), CIST (2014-2016), ICIS (2012-2016), PACIS (2013), WITS (2014)
- Conference Organization: INFORMS Session Chair 2016
- Discussant: International Industrial Organization Conference (2015), CSWIM (2015)