

Ran Xu

Room 326, Koons Hall
College of Agriculture, Health and Natural Resources
University of Connecticut
Storrs, CT. 06269

Email: ran.2.xu@uconn.edu

CURRENT POSITION

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|---|----------------------|
| Assistant Professor
Department of Allied Health Sciences, University of Connecticut | August 2019- |
| Postdoctoral Research Associate
Grado Department of Industrial and Systems Engineering, Virginia Tech | 2017-May 2019 |

EDUCATION

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| Ph.D., Measurement and Quantitative Methods
College of Education, Michigan State University
Dissertation Title: "IDENTIFICATION, ESTIMATION, AND SENSITIVITY ANALYSIS OF CONTAGION EFFECTS USING LONGITUDINAL SOCIAL NETWORK DATA."
Dissertation Advisor: Professor Kenneth A. Frank | 2011-2016 |
| B.S., Mathematics (Minor in Psychology)
Hefei University of Technology | 2007-2011 |

RESEARCH INTERESTS

Quantitative Methods, Computational Social Science, Social Networks, Health Education, Behavior, Prevention and Policy.

PEER-REVIEWED PUBLICATIONS

- Xu, R.**, Frank, K. A., Maroulis, S., Rosenberg, J. M. (2019). konfound: Command to quantify robustness of causal inferences. *The Stata Journal*, 19(3), 523-550.
- Kim, S., Wallsworth, G., **Xu, R.**, Frank, K. A., Schneider, B., Jacob, B., Dynarski, S. (2019). The Impact of the Michigan Merit Curriculum on High School Math Course Taking. *Educational Evaluation and Policy Analysis*, 0162373719834067.
- Xu, R.**, Deshon, R. P., Deshop, C. (2019). Challenges and Opportunities in the Estimation of Dynamic Models. *Organizational Research Methods*.
- Ghaffarzadegan, N. *, & **Xu, R.** * (2019). Late retirement, early careers, and the aging of U.S. science and engineering professors. *PLOS ONE*, 13(12), e0208411. * Co-equal first authors.
- Xu, R.**, Ghaffarzadegan, N. (2018). Neuroscience bridging scientific disciplines in health: who builds the bridge, who pays for it? *Scientometrics*, 117(2), 1183-1204.
- Ghaffarzadegan, N., **Xu, R.**, Larson, R. C., Hawley, J. D. (2018). Symptoms vs. Root Causes: A Needed Structural Shift in Academia to Help Early Careers. *BioScience*, 68(10), 744-745.
- Frank, K. A. *, & **Xu, R.** *, Penuel, W. R. (2018). Implementation of Evidence Based Practice in Human Service Organizations: Implications from Agent-Based Models. *Journal of Policy Analysis and Management*, 37(4), 867-895. * Co-equal first authors.
- Xu, R.** (2018). Alternative Estimation Methods for Identifying Contagion Effects using Longitudinal Social Network Data: A Latent-Space Adjusted Approach. *Social Networks*, 54, 101-117.

9. Song, Y., **Xu, R.** (2018). Affective Ties that Bind: Investigating the Affordances of Social Networking Sites for Commemoration of Traumatic Events. *Social Science Computer Review*, 0894439318770960.
10. Ghaffarzadegan, N., Rad, A. A., **Xu, R.**, Middlebrooks, S. E., Mostafavi, S., Shepherd, M., Chambers, L., Boyum, T. (2018). Dell's SupportAssist Customer Adoption Model: Enhancing the Next Generation of Data-Intensive Support Services. *System Dynamics Review*, 33(3-4), 219-253.
11. **Xu, R.**, Frank, K. A. (2016). The Implications for Network Structure of Dynamic Feedback between Influence and Selection. *Social Computing, Behavioral-Cultural Modeling, and Prediction*. Springer International Publishing.
12. Moore, J. A., **Xu, R.**, Frank, K. A., Draheim, H., & Scribner, K. T. (2015). [Social network analysis of mating patterns in American black bears \(*Ursus americanus*\)](#). *Molecular Ecology*, 24(15), 4010-4022.

HANDBOOK CHAPTERS

13. *Frank, K. A., & ***Xu, R.** (Forthcoming). Causal Inference in Network Analysis: Navigating Dependencies and Alternative Explanations to Create Good Science. Chapter in *Oxford Handbook of Social Network Analysis*. *Co-equal first authors.

BOOK REVIEW

14. Frank, K. A., *Saw, G. K., & ***Xu, R.** (2016). Book review of “Causality in a Social World” by Guanglei Hong. *Observational Studies*. *Equal co-authors.

MANUSCRIPTS UNDER REVIEW

15. Scientists’ Research Choice and Long Term Impact – Evidence from 30 years of HIV/AIDS Research. (With Arash Baghaei Lakeh and Navid Ghaffarzadegan). Under Review in *Research Policy*.

WORKING PAPERS

16. Sensitivity Analysis for Network Observations. Preparing for journal submission.
17. Advisers Learning from Advisees: The Effect of Advisee’s Dissertation on Adviser’s Future Research (With Navid Ghaffarzadegan). Preparing for journal submission.
18. Polarization through Generalized Balance in Networks. (With Kenneth A. Frank). Preparing for journal submission.

STATISTICAL PACKAGES

Rosenberg, J. M., **Xu, R.**, Frank, K. A. (2018). KONFOUND: R module to quantify robustness of causal inferences.

<https://jrosen48.github.io/konfound>

<http://konfound-it.com/>

Frank, K. A. & **Xu, R.** (2017). KONFOUND: Stata module to quantify robustness of causal inferences.

<https://ideas.repec.org/c/boc/bocode/s458298.html>

RESEARCH TALKS and TEACHING

Invited Research Talks

Rudd Center for Food Policy & Obesity, *University of Connecticut*

“Implementation of Supporting Wellness at Pantries (SWAP): Some Evidence from 25 Connecticut Food Pantries” **2019**

Quantitative Methods Workshop, University of Chicago

“Importance of Model Specification for Causal Inference in Social Network Analysis” **2019**

<i>Center for Human Resource Research, Ohio State University</i>	2018
“Neuroscience Bridging Scientific Disciplines in Health: Who builds the Bridge, Who Pays for it?”	
<i>Dell EMC, Round Rock, Texas</i>	2017
“A Smart System of Prediction and Solution of SupportAssist’s Major Operational Problems”	
<i>Network Science Institute, Northeastern University</i>	2017
“The Social Dynamics of Group Polarization during Diffusion”	
<i>NIH Office of Behavioral and Social Science Research, Washington D.C.</i>	2017
“Research Trend for New BSSR Workforce”	
Guest Lecturer	
<i>College of Education, Michigan State University</i>	2019
• Lecture on Estimating Social Influence with Latent Space Adjusted Approach	
<i>College of Education, Lehigh University</i>	2018
• Lecture on Advanced Topics in Social Network Analysis	
<i>Summer Institute, Peking University</i>	2014
• Lecture on Social Network Analysis and Agent-Based Model	
<i>Social Network Analysis Seminar, Michigan State University</i>	2014
• Lecture on Agent-Based Model	
<i>Social Network Analysis Seminar, Michigan State University</i>	2013
• Lecture on Agent-Based Model	
Instructor	2011
<i>Summer Institute, New Oriental Education & Tech Grp</i>	
Teaching Assistant	
AERA Professional Development Workshop	2018
“What Would It Take to Change Your Inference? Quantifying the Discourse About Causal Inferences in the Social Sciences.”	
AERA Professional Development Workshop	2017
“Sensitivity Analysis: Quantifying the Discourse about Causal Inference.”	

CONFERENCE PRESENTATIONS

1. “How Funding Facilitates Interdisciplinary Research for Early Career Scientists: Evidence from Neuroscience”. Institute for Research on Innovation and Science (IRIS) Summit, Ann Arbor. 2019
2. “The Network of Cross-Disciplinary Research in Health: Neuroscience Bridging Scientific Disciplines.” Association for Public Policy Analysis & Management Fall Research Conference, Washington, D. C., 2018
3. “Alternative Estimation Methods for Identifying Contagion Effects using Longitudinal Social Network Data – A Latent Space Adjusted Approach.” American Educational Research Association, New York. 2018
4. “The Network of Cross-disciplinary Research in Health: Neuroscience Bridging Scientific Disciplines.” INFORMS conference, Houston, Texas. 2017
5. “The Micro-Dynamics of Network Leverage: Implications for Change Agents External to an Organization.” International conference of the System Dynamics Society, Boston, Massachusetts. 2017
6. “Sensitivity analysis for biases in network observations.” International Network for Social Network Analysis, Beijing, China, 2017.
7. “The Impact of the Michigan Merit Curriculum on High School Math Course-Taking.” American Educational Research Association, San Antonio, Texas. 2017.
8. “The Implications for Network Structure of Dynamic Feedback between Influence and Selection.” International Conference on Social Computing, Behavioral-Cultural Modeling, & Prediction and Behavior Representation in Modeling and Simulation, Washington D.C., 2016.

9. "Alternative Estimation Methods for Identifying Contagion Effects using Longitudinal Social Network Data." International Network for Social Network Analysis, Newport Beach, California, 2016.
10. "The Impact of the Michigan Merit Curriculum on High School Math Course-Taking." Association for Education Finance and Policy, Denver, Colorado, 2016.
11. "The Micro-Dynamics of Network Leverage: Implications for Change Agents External to a System." Midwest Sociology of Education, University of Notre Dame, 2014.
12. "The Micro-Dynamics of Network Leverage: Implications for Change Agents External to a System." International Network for Social Network Analysis, St. Petersburg, Florida, 2014.

OTHER SELECTED CONFERENCE PROCEEDINGS

13. "Discussion Networks and Collective Memory Building on Weibo." *International Communication Association*, Fukuoka, Japan. 2016.
14. "High School Transcript Study." Association for Education Finance and Policy, Washington D. C., 2015.

HONORS AND AWARDS

Dissertation Completion Fellowship, Michigan State University	2016
Walker Hill Fellowship, College of Education, Michigan State University	2013-2015
Graduate Assistantship, Michigan State University	2011-2016

GRANTS

How mothers evaluate and spread information related to child nutrition on social media. Sponsor: College of Agriculture, Health and Natural Resources, University of Connecticut. \$60,000. PI: Molly Waring. Role: Co-I. October 2019 – September 2022.

How Funding Facilitates Interdisciplinary Research for Early Career Scientists: Evidence from Neuroscience Research. Sponsor: IRIS, University of Michigan. \$30,000. PI: Ran Xu. January 2019 – December 2019.

Shaping Health Research Workforce for Tomorrow: Understanding Career Path and Productivity of early-career health policy researchers. Sponsor: Institute for Society, Culture and Environment, Virginia Tech. \$30,000. PI: Navid Ghaffarzadegan. Role: Co-I. July 2017 – June 2018.

Identification, Estimation, and Sensitivity Analysis of Longitudinal Social Network Data. Sponsor: Dissertation Completion Award, Michigan State University. \$6000. PI: Ran Xu. May 2016 – September 2016.

PROFESSIONAL SERVICE

2019 NSF Panelists

Journal Reviewer:

Physics Letter A

Educational Evaluation and Policy Analysis

Sociological Methods and Research

Ecology and Society

Network Science

Psychometrika

F1000Research

Journal of Educational and Behavioral Statistics

Journal of Policy Analysis and Management

American Journal of Education