

Kang Zhao

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RESEARCH INTERESTS

Data science, social and business networks, social media, online health communities.

PROFESSIONAL EXPERIENCE

- Associate Professor (with Tenure) and Tippie Research Fellow 2018 - Present
Assistant Professor (Tenure-track) 2012 - 2018
Department of Business Analytics, Tippie College of Business
Joint appointment with Interdisciplinary Graduate Program in Informatics (IGPI)
The University of Iowa, Iowa City, IA.
- Graduate Research and Teaching Assistant 2007 - 2012
College of Information Sciences and Technology
Penn State University, University Park, PA.
- Graduate Research Assistant 2004 - 2006
Institute for Geospatial Research and Education
Eastern Michigan University, Ypsilanti, MI.

EDUCATION

- The Pennsylvania State University, University Park, PA, USA.
Ph.D., Information Sciences and Technology (IST), 2012.
- Santa Fe Institute, Santa Fe, NM, USA.
Complex Systems Summer School, 2010. (Awarded full financial support.)
- Eastern Michigan University, Ypsilanti, MI, USA.
M.S., Computer Science, 2006.
- Beijing Institute of Technology, Beijing, China.
B.E. (with Honor), Electrical Engineering, 2003.

HONORS AND AWARDS

- Honor Thesis Mentor Award (2019)
Tippie Business Honor Society, The University of Iowa.
- Featured in the University of Iowa “Dare to Discover” campaign (2017)
The University of Iowa.
- Early Career Research Award (2016)
Tippie College of Business, The University of Iowa.
- R.W. Graham Endowed Graduate Fellowship (2007)
College of IST, Penn State University.
- Graduate Achievement Award (2006)
Department of Computer Science, Eastern Michigan University.
- Outstanding College Graduate of Beijing (2003)
Beijing Municipal Commission of Education.
- Outstanding College Graduate of Beijing Institute of Technology (2003)

- First-class Renmin Fellowship (1999-2003)
Beijing Institute of Technology (awarded for four consecutive years).
- Beijing Institute of Technology Top Honor Xu Teli Fellowship (2002)
- Leida Technology Progress Fellowship (2001)
Beijing Institute of Technology.
- Outstanding Student of Beijing Institute of Technology (2000)

JOURNAL ARTICLES (* indicates current or former students I advised, co-advised or mentored)

- [J.42] Wu, J., Zuo, R., He, C., Xiong, H., Zhao, K., and Hu, Z. "The Effect of Information Literacy Heterogeneity on Epidemic Spreading in Information and Epidemic Coupled Multiplex Networks." *Physica A: Statistical Mechanics and its Applications* (596), 2022, 127119.
- [J.41] Tian, H., Zheng, X., Zhao, K., Liu, W., and Zeng, D. "Inductive Representation Learning on Dynamic Stock Co-Movement Graphs for Stock Predictions." *INFORMS Journal on Computing* (forthcoming).
- [J.40] Wang, X.*, Zhang, M., W. Fan, and Zhao, K. "Understanding the Spread of COVID-19 Misinformation on Social Media--The Effects of Topics and a Political Leader's Nudge." *Journal of the Association for Information Science and Technology* (73:5), 2022, pp 726-737.
- [J.39] Yang, J., Tang, K., Cao, Z., Pfeiffer, D., Zhao, K., Zhang, Q., and Zeng, D. "Demand-Driven Spreading Patterns of African Swine Fever in China." *Chaos: An Interdisciplinary Journal of Nonlinear Science* (31:6), 2021, pp 061102.
- [J.38] Wang, X.*, High, A., Wang, X*., and Zhao, K. "Predicting Users' Continued Engagement in Online Health Communities from the Quantity and Quality of Received Support." *Journal of the Association for Information Science and Technology* (72:6), 2021, pp 710-722.
- [J.37] Wen, W., Zeng, D., Bai, J., Zhao, K., and Li, Z. "Learning Embeddings Based on Global Structural Similarity in Heterogeneous Networks." *IEEE Intelligent Systems* (36:6), 2021, pp 13-22.
- [J.36] Zuo, Z.* and Zhao, K. "Understanding and Predicting Future Research Impact at Different Career Stages--A Social Network Perspective." *Journal of the Association for Information Science and Technology* (72:4), 2021, pp 454-472.
- [J.35] Wang, X.*, Zhang, Y., Wang, S., and Zhao, K. "Migrant Inflows and Online Expressions of Regional Prejudice in China: Findings from a Social Media Site." *Public Opinion Quarterly* (85:1), 2021, pp 123-146.
- [J.34] Wang, X.*, Zhao, K., Zhou, X., and Street, N.W. "Predicting User Posting Activities in Online Health Communities with Deep Learning." *ACM Transactions on Management Information Systems*, (11:3), 2020, Article 12.
- [J.33] Sun, L., Zhao, K., Han, C., and Liu, Z. "Enhancing Hyperspectral Unmixing with Two-stage Multiplicative Update Nonnegative Matrix Factorization." *IEEE Access* (7), 2019, pp 171023-171031.
- [J.32] Bigsby, K.G.*, Ohlmann, J.W., and Zhao, K. "Keeping It 100: Social Media and Self-presentation in College Football Recruiting." *Big Data* (7:1), 2019, pp 3-20.
- [J.31] Zuo, Z.*, Zhao, K., and Ni, C., "Standing on the Shoulders of Giants?--Faculty Hiring in Information Schools." *Journal of Informetrics*. (13:1), 2019, pp 341-353.
- [J.30] Zuo, Z.*, Qian, H., and Zhao, K. "Understanding the Field of Public Affairs through the Lens of Ranked Ph.D. Programs in the United States." *Policy Studies Journal*, (47:S1), 2019, pp 159-180.

- [J.29] Wang, X.*, Zhao, K., Cha, S., Amato, M.S., Cohn, A.M., Pearson, J.L., Papandonatos, G.D., and Graham, A.L. "Mining User-Generated Content in an Online Smoking Cessation Community to Identify Smoking Status: A Machine Learning Approach." *Decision Support Systems* (116), 2019, pp 26-34.
- [J.28] Cohn, A.M., Amato, M.S., Zhao, K., Wang, X.*, Cha, S., Pearson, J.L., Papandonatos, G.D., and Graham, A.L., "Discussions of Alcohol Use in an Online Social Network for Smoking Cessation: Analysis of Topics, Sentiment, and Social Network Centrality." *Alcoholism-Clinical and Experimental Research* (43:1), 2019, pp108-114.
- [J.27] Bigsby, K.G.*, Ohlmann, J.W., and Zhao, K. "The Turf is Greener on the Other Side: Predicting De-commitments in College Football Recruiting Using Social Network Data." *Decision Support Systems* (116), 2019, pp 1-12.
- [J.26] Zhao, K., Zuo, Z.*, and Blackhurst, J. "Modelling Supply Chain Adaptation for Disruptions: An Empirically Grounded Complex Adaptive Systems Approach," *Journal of Operations Management* (65:2), 2019, pp 190-212. **(Top cited article 2019-2020 in the Journal of Operations Management)**
- [J.25] Amato, M.S., Papandonatos, G.D., Cha, S., Wang, X.*, Zhao, K., Cohn, A.M., Pearson, J.L., Graham, A.L. "Inferring Smoking Status from User Generated Content in an Online Cessation Community." *Nicotine and Tobacco Research* (21:2), 2019, pp 205-211.
- [J.24] Zhao, K., Scheibe, K., Blackhurst, J., and Kumar, A. "Supply Chain Network Robustness Against Disruptions: Topological Analysis, Measurement, and Optimization." *IEEE Transactions on Engineering Management* (66:1), 2019, pp 127-139.
- [J.23] Pearson J.L., Amato M.S., Papandonatos G.D., Zhao K., Erar B., Wang X.*, Cha S., Cohn A.M., Graham A.L. "Exposure to Positive Peer Sentiment about Nicotine Replacement Therapy in an Online Social Network for Smoking Cessation is Associated with NRT Use." *Addictive Behaviors* (87), 2018, pp 39-45.
- [J.22] Zuo, Z.*, and Zhao, K. "The More Multidisciplinary the Better? --The Prevalence and Interdisciplinarity of Research Collaborations in Multidisciplinary Institutions." *Journal of Informetrics* (12:3), 2018, pp 736-756.
- [J.21] Graham, A.L., Zhao, K., Papandonatos, G.D., Erar, B., Wang, X.*, Cha, S., Cohn, A.M., Pearson, J.L., and Amato, M.S. "A Prospective Examination of Online Social Network Dynamics and Smoking Cessation." *PLOS ONE* (12:8), 2017, e0183655.
- [J.20] Bigsby, K.G.*, Ohlmann, J.W., and Zhao, K. "Online and Off the Field: Predicting School Choice in College Football Recruiting from Social Media Data." *Decision Analysis* (14:4), 2017, pp 261-273.
- [J.19] Cohn, A.M., Zhao, K., Cha, S., Wang, X.*, Amato, M.S., Pearson, J.L., Papandonatos, G.D., and Graham, A.L. "A Descriptive Study of the Prevalence and Typology of Alcohol-related Posts in an Online Social Network for Smoking Cessation." *Journal of Studies on Alcohol and Drugs* (78:5), 2017, pp 665-673.
- [J.18] Wang, X.*, Zhao, K., and Street, N. "Analyzing and Predicting User Participations in Online Health Communities--A Social Support Perspective." *Journal of Medical Internet Research* (19:4), 2017, e130.
- [J.17] Graham, A.L., Papandonatos, G.D., and Zhao, K. "The Failure to Increase Social Support: It Just Might be Time to Stop Intervening (and Start Rigorously Observing)." *Translational Behavioral Medicine* (7:4), 2017, pp 816-820.

- [J.16] Zuo, Z.*, Zhao, K., and Eichmann, D. "The State and Evolution of U.S. iSchools: from Talent Acquisitions to Research Outcome." *Journal of the Association for Information Science and Technology (JASIST)* (68:5), 2017, pp 1266-1277.
- [J.15] Pearson, J.L., Amato, M.S., Wang, X.*, Zhao, K., Cha, S., Cohn, A.M., Papandonatos, G.D., and Graham, A.L., "How U.S. Smokers Refer to e-cigarettes: An Examination of User-generated Posts from a Web-based Smoking Cessation Intervention, 2008-2015." *Nicotine and Tobacco Research* (19:2), 2016, pp 253-257.
- [J.14] Lash, M.*, and Zhao, K. "Early Predictions of Movie Success: the Who, What, and When of Profitability." *Journal of Management Information Systems (JMIS)* (33:3), 2016, pp 874-903.
- [J.13] Zhao, K., Wang, X.*, Cha, S., Cohn, A.M., Papandonatos, G.D., Amato, M.S., Pearson, J.L., and Graham, A.L., "A Multi-relational Social Network Analysis of an Online Community for Smoking Cessation." *Journal of Medical Internet Research*, (18:8), 2016, e233.
- [J.12] Hu, Y., Song, Y., Zhao, K., and Xu, B. "Integrated Recovery of Aircraft and Passengers after Airline Operation Disruption based on the GRASP Algorithm." *Transportation Research Part E: Logistics and Transportation Review* (87) 2016, pp 97-112.
- [J.11] Zhao, K., Xie, Y., and Tsui, K.L. "System Informatics--from Methodology to Applications." *IEEE Intelligent Systems* (30:6) 2015, pp 12-29.
- [J.10] Zhao, K., Greer, G., Yen, J., Mitra, P., and Portier, K. "Leader Identification in an Online Health Community for Cancer Survivors: A Social Network-based Classification Approach." *Information Systems and e-Business Management* (13:4), 2015, pp 629-645.
- [J.9] Zhao, K., Yen, J., Greer, G., Qiu, B., Mitra, P., and Portier, K. "Finding Influential Users of Online Health Communities: a New Metric based on Sentiment Influence." *Journal of the American Medical Informatics Association (JAMIA)* (21:e2) 2014, pp e212-e218.
- [J.8] Zhao, K., Wang, X.*, Yu, M., and Gao, B. "User Recommendation in Reciprocal and Bipartite Social Networks--An Online Dating Case Study." *IEEE Intelligent Systems* (29:2) 2014, pp 27-35.
- [J.7] Portier, K., Greer, G.E., Rokach, L., Ofek, N., Wang, Y., Biyani, P., Yu, M., Banerjee, S., Zhao, K., Mitra, P., and Yen, J. "Understanding Topics and Sentiment in an Online Cancer Survivor Community." *Journal of the National Cancer Institute Monographs* (47) 2013, pp 195-198.
- [J.6] Zhao, K., and Kumar, A. "Who Blogs What: Understanding Publishing Behaviors of Bloggers." *World Wide Web* (16:5-6) 2013, pp 621-644.
- [J.5] Zhao, K., Yen, J., Ngamassi, L.-M., Maitland, C., and Tapia, A. "Simulating Inter-organizational Collaboration Networks: A Multi-relational and Event-based Approach." *Simulation* (88:5) 2012, pp 616-631.
- [J.4] Zhao, K., Kumar, A., and Yen, J. "Achieving High Robustness in Supply Distribution Networks by Rewiring." *IEEE Transactions on Engineering Management* (58:2) 2011, pp 347-362.
- [J.3] Zhao, K., Kumar, A., Harrison, T.P., and Yen, J. "Analyzing the Resilience of Complex Supply Network Topologies against Random and Targeted Disruptions." *IEEE Systems Journal* (5:1) 2011, pp 28-39.
- [J.2] Zhao, K., Yen, J., Ngamassi, L.-M., C., and Tapia, A.H. "Modeling Emerging Coalitions in the Context of Inter-organizational Networks: A Case Study of Humanitarian Coordination." *International Journal of Intelligent Control and Systems* (14:1) 2009, pp 97-103.
- [J.1] Xie, Y., Batty, M., and Zhao, K. "Simulating Emergent Urban Form Using Agent-Based Modeling: Desakota in the Suzhou-Wuxian Region in China." *Annals of the Association of American Geographers* (97:3) 2007, pp 477-495.

REFEREED CONFERENCE AND WORKSHOP PAPERS

- [C.35] Wang, X. *, Zhao, K., Amato, M.S., Graham, A.L., Stanton, C.A., and Shuter, J. "Jumpstarting Online Interactions to Promote Smoking Cessation: Analyzing the Role of Seed Users in an Online Health Community." *The 31st Annual Workshop on Information Technologies and Systems (WITS)*, Austin, TX, 2021.
- [C.34] Lee, S.* and Zhao, K. "Hierarchy2vec--Representation Learning in Hierarchical Collaboration Networks for Team Performance Prediction." *INFORMS Data Science Workshop*, Online, 2021 (**Nominated for the Best Student Paper Award**).
- [C.33] Rios, J.*, Tian, H., Street, N., Zhang, X. and Zhao, K. "A Hybrid Deep Learning Model for Dynamic Stock Movement Predictions based on Supply Chain Networks." *The 30th Annual Workshop on Information Technologies and Systems (WITS)*, Online, 2020.
- [C.32] Gao, G., Liu, H., and Zhao, K. "Audience Come and Go: Learning Dynamic Representations to Recommend Live Streaming Rooms." *INFORMS Data Science Workshop*, Online, 2020 (**Runner-up of the Best Paper Award**).
- [C.31] Lee, S.*, Jang, H. *, Zhao, K., Amato, M.S., and Graham, A.L. "Multi-Relational Link Prediction for an Online Health Community." *INFORMS Data Science Workshop*, Seattle, WA, 2019.
- [C.30] Zuo, Z.*, and Zhao, K. "Understanding and Predicting Future Research Impact-A Social Capital Perspective." *INFORMS Data Science Workshop*, Seattle, WA, 2019.
- [C.29] Wang, X.*, Joshi, A.*, Zhao, K., and Zhou, X. "Social Support and User Churn Prediction for Online Health Communities--A Trajectory-based Deep Learning Method." *The 28th Annual Workshop on Information Technologies and Systems (WITS)*, Santa Clara, CA, 2018.
- [C.28] Rios, J.*, Zhao, K., and Street, N. "Predicting Stock Price Movements via Multi-relational Inter-firm Networks." *INFORMS Data Science Workshop*, Phoenix, AZ, 2018.
- [C.27] Zuo, Z.*, Zhao, K. "A Graphical Model for Topical Impact Over Time." *The ACM/IEEE Joint Conference on Digital Libraries (JCDL)*, Fort Worth, TX, 2018, pp 405-406.
- [C.26] Wang, X.*, Zhao, K., Cha, S., Amato, M.S., Cohn, A.M., Pearson, J.L., Papandonatos, G.D., and Graham, A.L. "Identifying Smoking Status from User-Generated Content in An Online Community for Smoking Cessation--A Machine Learning Approach." *27th Annual Workshop on Information Technologies and Systems (WITS)*, Seoul, Korea, 2017.
- [C.25] Bigsby, K.G.*, Ohlmann, J.W., and Zhao, K. "The Turf is Greener on the Other Side: Predicting De-commitments in College Football Recruiting Using Social Network Data." *INFORMS Data Science Workshop*, Houston, TX, 2017.
- [C.24] Lin, Q., Wang X.*, and Zhao, K. "Reciprocal Recommendation in Online Dating by Binary Matrix Completion with Data-Dependent Regularization." *INFORMS Data Science Workshop*, Houston, TX, 2017 (**Winner of the Best Paper Award**).
- [C.23] Wang, X. *, Zuo, Z. *, Zhang, Y., Zhao, K., Chang, Y.-C., Chou, C.-S. "Investigating Regional Prejudice in China Through the Lens of Weibo." *Proceedings of International Conference on Social Informatics (SocInfo'16)*, Bellevue, WA, 2016, pp. 500-513.
- [C.22] Zuo, Z. *, Wang, X. *, Eichmann, D., and Zhao, K. "Research Collaborations in Multidisciplinary Environments – a Case Study of iSchools." *Proceedings of the 3rd WWW Workshop on Big Scholarly Data (BigScholar'16)*, Montreal, Canada, 2016, pp. 443-448.
- [C.21] Wang, S. *, Zhao, K., Yang, T., and Zhang, Q. "Concurrent Diffusions of Information and Behaviors in Online Social Networks—A Case Study of the Ice Bucket Challenge." *Proceedings of the 25th Annual Workshop on Information Technologies and Systems (WITS'15)*, Dallas, TX, 2015.

- [C.20] Wang, X. *, Zhao, K., Pant, G. and Rodriguez, J.R. * "The Diffusion of User Roles via Social Networks in Online Health Communities." *Proceedings of the 25th Annual Workshop on Information Technologies and Systems (WITS'15)*, Dallas, TX, 2015.
- [C.19] Zhao, K., Wang, X. *, Graham, A.L., Cha, S., Cohn, A.M., Erar, B., and Papandonatos G.D. "The Structure and Dynamics of a Multi-relational Online Social Network for Smoking Cessation." *Proceedings of the 25th Annual Workshop on Information Technologies and Systems (WITS'15)*, Dallas, TX, 2015.
- [C.18] Wang, X. *, Zuo, Z. *, and Zhao, K. "The Evolution and Diffusion of User Roles in Online Health Communities--A Social Support Perspective." *Proceedings of IEEE International Conference on Healthcare Informatics (ICHI'15)*, Dallas, TX, 2015, pp. 48-56.
- [C.17] Lash, M. *, Fu, S. *, Wang, S. *, and Zhao, K. "Early Prediction of Movie Success--What, Who, and When." *Proceedings of the 2015 International Conference on Social Computing, Behavioral-Cultural Modeling, & Prediction (SBP'15)*, Washington, DC, 2015, pp. 345-349.
- [C.16] Wang, X. *, Zhao, K., and Street, N. "Social Support and User Engagement in Online Health Communities." *Proceedings of the International Conference for Smart Health (ICSH'14)*, Beijing, China, 2014, pp. 97-110.
- [C.15] Kumar, A., and Zhao, K. "Making Sense of a Healthcare Forum--Smart Keyword and User Navigation Graphs." *Proceedings of the 34th International Conference on Information Systems (ICIS'2013)*, Milan, Italy, 2013.
- [C.14] Yu, M., Zhao, K., Yen, J., and Kreager, D. "Recommendation in Reciprocal Bi-partite Social Networks--A Case Study of Online Dating." *Proceedings of the 6th International Conference on Social Computing, Behavioral-Cultural Modeling and Prediction (SBP'13)*, Washington, DC, 2013, pp. 231-239.
- [C.13] Zhao, K., Qiu, B., Caragea, C., Wu, D., Mitra, P., Yen, J., Greer, G.E., and Portier, K. "Identifying Leaders in an Online Cancer Survivor Community." *Proceedings of the 21st Annual Workshop on Information Technologies and Systems (WITS'11)*, Shanghai, China, 2011, pp. 115-120.
- [C.12] Qiu, B., Zhao, K., Mitra, P., Wu, D., Caragea, C., Yen, J., Greer, G.E., and Portier, K. "Get Online Support, Feel Better--Sentiment Analysis and Dynamics in an Online Cancer Survivor Community." *Proceedings of the Third IEEE International Conference on Social Computing (SocialCom'11)*, Boston, MA, 2011, pp. 274-281.
- [C.11] Zhao, K., Kumar, A., Spaziani, M., and Yen, J. "Who Blogs What: Understanding Behavior, Impact and Types of Bloggers." *Proceedings of the 20th Annual Workshop on Information Technologies and Systems (WITS'10)*, St. Louis, Missouri, 2010, pp. 176-181.
- [C.10] Zhao, K., Yen, J., Ngamassi, L.-M., Maitland, C., and Tapia, A. "From Communication to Collaboration: Simulating the Emergence of Inter-organizational Collaboration Network." *Proceedings of 2010 IEEE International Conference on Social Computing (SocialCom'10)*, Minneapolis, MN, 2010, pp. 413-418.
- [C.9] Tapia, A.H., Ngamassi, L.-M., Maitland, C., Zhao, K., and Bajpai, K. "Crossing Borders, Organizations, Levels and Technologies: IS Collaboration in Humanitarian Relief." *AMCIS 2010 Proceedings*, Peru, 2010, Paper 115.
- [C.8] Ngamassi, L.-M., Zhao, K., Maldonado, E., Maitland, C., and Tapia, A. "Exploring Motives for Collaboration within a Humanitarian Inter-organizational Network." *Proceedings of the 5th Annual iConference*, University of Illinois at Urbana-Champaign, 2010, pp. 224-232.

- [C.7] Zhao, K., Ngamassi, L.-M., Yen, J., Maitland, C., and Tapia, A. "Assortativity Patterns in Multi-dimensional Inter-organizational Networks: A Case Study of the Humanitarian Relief Sector." *Proceedings of the 2010 International Conference on Social Computing, Behavioral Modeling & Prediction (SBP'10)*, Bethesda, MD, 2010, pp. 265-272.
- [C.6] Zhao, K., Kumar, A., and Yen, J. "Effect of Topology on Robustness of a Supply Network--Metrics and Results." *Proceedings of the 19th Annual Workshop on Information Technologies and Systems (WITS'09)*, Phoenix, Arizona, USA, 2009, pp. 97-102.
- [C.5] Zhao, K., Yen, J., Maitland, C., Tapia, A., and Ngamassi Tchouakeu, L.-M. "A Formal Model for Emerging Coalitions under Network Influence in Humanitarian Relief Coordination." *Proceedings of the Spring Simulation Multi-conference (SpringSim'09)*, San Diego, CA, 2009, Article No.10.
- [C.4] Zhao, K., Maitland, C., Ngamassi Tchouakeu, L.-M., Orendovici, R., Tapia, A.H., and Yen, J. "Emergence of Collaborative Projects and Coalitions: A Framework for Coordination in Humanitarian Relief." *Proceedings of the World Congress of Social Simulation (WCSS'08)*, George Mason University, Fairfax, VA, 2008.
- [C.3] Saab, D.J., Maldonado, E., Orendovici, R., Tchouakeu, L.M., Gorp, A.v., Zhao, K., Maitland, C., Tapia, A.H. "Building Global Bridges: Coordination Bodies for Improved Information Sharing among Humanitarian Relief Agencies." *Proceedings of the 5th International Information Systems for Crisis Response & Management Conference (ISCRAM'08)*, Washington, DC, 2008, pp. 471-483.
- [C.2] Zhao, K., and Evett, M.P. "CyberLab: An Online Virtual Laboratory Toolkit for Non-Programmers." *Proceedings of the 8th IEEE International Conference on Advanced Learning Technologies (ICALT '08)*, Santander, Spain, 2008, pp. 316-318.
- [C.1] Xie, Y., Batty, M., and Zhao, K. "Simulating an Emergent Urban Form: Desakota in China," *Proceedings of the Ninth International Conference on Computers in Urban Planning and Urban Management (CUPUM'05)*, London, UK, 2005.

BOOK CHAPTER

- [B.1] Tchouakeu, L.-M. N., Maldonado, E., Zhao, K., Robinson, H., Maitland, C., and Tapia, A. "Exploring Barriers to Coordination between Humanitarian NGOs: A Comparative Case Study of two NGO's Information Technology Coordination Bodies." *Information Systems and Modern Society: Social Change and Global Development*, IGI Global, 2013, pp 87-112.

WORKING PAPERS

- [W.7] "Supply Chain Risk Management: A Guide to Disruption Resilience through Effective Resilience Strategy Choice," under review.
- [W.6] "Assembling Teams at the Knowledge Frontier: How Research Team Knowledge Continuity Supports Innovation Success in Combating COVID-19," under review.
- [W.5] "Search Engine Advertising and Sales over Time--An Empirical Investigation in eCommerce," under review.
- [W.4] "Reciprocal Recommendations by Binary Matrix Completions with Comparison-Based Loss Function," under review.
- [W.3] "Network Representation Learning Based on Cognitive Spreading Activations," under review.
- [W.2] "Predicting Nexus Suppliers to Prevent Cascading Supply Chain Disruptions," under review.
- [W.1] "Live Streaming Recommendations Based on Dynamic Representation Learning," under review.

GRANTS

- Public Libraries for Disaster Resilience: Assessing Libraries' Community Impacts in Times of Climate and Socio-Economic Crises** 2021-22
The University of Iowa Jumpstarting Tomorrow Grant. Co-PI. \$150,000.
- Understanding Gender Gaps in Academic Science through the Lens of Topic Fit: An Interdisciplinary Investigation** 2020-21
Tippie College of Business Research Excellence Grant. Co-PI with Rong Su. \$6,000.
- Effects of Supply Chain and Board Membership Networks on Firm Performances** 2020-21
Tippie College of Business Research Excellence Grant. Co-PI with Suyong Song. \$6,000.
- In Whom We Trust: How Entrepreneurs' Communication Moderates the Effect of Their Unmet Promises on Funders Reactions.** 2020-21
Tippie College of Business Research Excellence Grant. Co-PI with Michele Williams. \$6,000.
- Support for the Doctoral Consortium Program at the IEEE International Conference on Healthcare Informatics 2016.** 2016-17
National Science Foundation, Award 1644419. PI. \$23,000.
- Health Knowledge Discovery and Personalized Treatment from Online Social Media.** 2016-19
National Natural Science Foundation of China, Award 71572013. Co-PI. CNY 470,000.
- Social Dynamics of Substance Use in Online Social Networks for Smoking Cessation.** 2014-16
National Institute of Health, R01 CA192345. \$468,382.
As a co-PI for this multiple-PI project (Graham and Zhao).
- Old Gold Fellowship** 2013
The University of Iowa. PI.
- Network Science Exploration Research Grant.** 2010
Penn State University. PI. \$4,000.

SELECTED TALKS AND PRESENTATIONS

- [T.23] "Predicting Stock Price Movements--Machine Learning Approaches based on Inter-firm Networks." *Robinson College of Business, Georgia State University, 2022.*
- [T.22] "The Role of Prospective Social Ties in Job Placements." *China Summer Workshop on Information Management (CSWIM'19)*, Shenzhen, China, 2019.
- [T.21] "Predicting Stock Price Movements via Multi-relational Inter-firm Networks." *China Summer Workshop on Information Management (CSWIM'19)*, Shenzhen, China, 2019.
- [T.20] "Social Dynamics of Substance Use in Online Social Networks for Smoking Cessation." Health Communication and Informatics Research Branch, National Cancer Institute, 2018.
- [T.19] "Online and Off the Web--Analyzing User Behaviors and Health Outcome in Online Health Communities." *The 6th International Conference on Smart Health (ICSH'18)*, Wuhan, China, 2018.
- [T.18] "Social Media Data Mining and Network-based Simulations." Wuhan University Summer School on Business Data Analytics, China, 2018.
- [T.17] "Predicting Decommitments in College Football Recruiting Using Social Network Data." *Winter Conference on Business Analytics*, Snowbird, Utah, 2017.
- [T.16] "A Network Analysis Approach to Predict Supply Chain Performance." *Winter Conference on Business Analytics*, Snowbird, Utah, 2017.

- [T.15] "Concurrent Diffusion of Information and Behaviors in Online Social Networks." *2016 Winter Conference on Business Intelligence*, Snowbird, Utah, 2016.
- [T.14] "Social Dynamics of Substance Use in Online Social Networks for Smoking Cessation." *VA Innovations in Healthcare Informatics Cyberseminar*, U.S. Department of Veteran Affairs, 2015.
- [T.13] "The Evolution of User Roles in Online Health Communities--A Social Support Perspective." *The 19th Pacific-Asia Conference on Information Systems (PACIS'15)*, Singapore, 2015.
- [T.12] "Who is Going to Change Next? A Study of User Roles Transition in Online Health Communities." *The 9th China Summer Workshop on Information Management (CSWIM'15)*, Hefei, China, 2015.
- [T.11] "Predicting User Engagement in Online Health Communities Based on Social Support Analysis." *2015 Winter Conference on Business Intelligence*, Snowbird, Utah, 2015.
- [T.10] "Users' Roles and Involvement in Online Health Communities--a Social Support Perspective." *The 16th International Conference on Electronic Commerce (ICEC'14)*, Philadelphia, 2014.
- [T.9] "Users' Roles and Involvement in Online Health Communities--a Social Support Perspective." *The 8th China Summer Workshop on Information Management (CSWIM'14)*, Chengdu, China, 2014.
- [T.8] "Understanding Social Support and User Behaviors in Online Health Communities." *2014 Winter Conference on Business Intelligence*, Snowbird, Utah, 2014.
- [T.7] "Sentiment Influence and Influential Users in Online Health Communities." 3M Corporate Research, St. Paul, MN. 2013.
- [T.6] "Role Identification--Influential users and community leadership." *International Conference on Social Intelligence and Technology*, University Park, PA, 2013.
- [T.5] "Recommendation in Reciprocal Bipartite Social Networks for Online Dating." *2013 Winter Conference on Business Intelligence*, Snowbird, Utah, 2013.
- [T.4] "Robustness of Heterogeneous Supply Networks--New Metrics and Model." *2010 American Physical Society March Meeting*, Portland, OR, 2010.
- [T.3] "Exploring Assortative Patterns in Multi-dimensional Inter-organizational Networks: A Case Study of the Humanitarian Relief Sector." *2009 North American Association for Computational Social & Organization Sciences Annual Conference*, Tempe, Arizona, USA, 2009.
- [T.2] "Robustness of Heterogeneous Supply Networks against Random and Targeted Disruptions." *First Annual Complexity Conference*, Ann Arbor, MI, USA, 2009.
- [T.1] "EnDURE: Environmental Disaster Urban Recovery and Evaluation Model." *Annual Conference of the North American Association for Computational Social & Organizational Sciences*, Notre Dame, IN, 2006.

CITATION

Google Scholar: total citation 2,092, h-index 23, i10-index 33 (as of March 2021).

TEACHING

Teaching load: three courses per academic year. Avg. student evaluation score **5.43** out of 6.

- Database Management (*Undergraduate*).
- Analyzing Data for Business Intelligence (*Undergraduate*).
- Databases and Web Services (*Undergraduate*).
- Social Network Analytics (*PhD*).
- Database Systems (*MBA*).

- Big Data Management and Analytics (*MSBA*).
- Data Management and Visual Analytics (*MBA, MAc, MSBA*).

SELECTED PRESS COVERAGE

- "Want to earn a college football scholarship? Better start tweeting." *Newswise*, June 24, 2019.
- "University of Iowa Researcher Can Predict Where Football Recruits Will Go." *USA Today*, Jan. 27, 2018.
- "Commitment Is Key for Online Quit-Smoking Groups." *U.S. News and World Report*, Nov 17, 2017.
- "It's Hard to Predict a Movie's Profitability, but You Learn Some Lessons Along the Way." *Washington Post*, May 16, 2016.
- "Predicting Future Box Office Success." *Inside Higher Ed*, March 25, 2016.
- "The AI that Could Change Hollywood." *BBC*, Feb 24, 2016.
- "Box Office Predictions from Robots Find A-List Actors Hurt Film Profits." *International Business Times*, June 24, 2015.
- "Is Big Data Dating the Key to Long-lasting Romance?" *BBC News*, March 24, 2014.
- "New Twists for Love in Age of Big Data." *Agence France-Presse*, Feb 12, 2014.
- "Machine Learning + Love." *New York Public Radio*, Feb 12, 2014.
- "Why the Future of Online Dating Relies on Ignoring You." *Forbes*, Dec 7, 2013.
- "A New Online Dating Algorithm Will Match You with Someone You Might Actually Have A Chance With." *Business Insider*. Dec 11, 2013.
- "Good Samaritan Index Identifies Web Users Who Help Other Most." *MIT Technology Review*. Nov 28, 2012.

PROFESSIONAL SERVICE

- Chair, INFORMS Artificial Intelligence Section, 2014-2016.
- Conference Co-chair, INFORMS Workshop on Data Science, 2020.
- Emerging Topics Co-chair, INFORMS Annual Meeting, 2022.
- Program Co-chair, Pre-AMCIS SIGBPS Workshop on Blockchain and Financial Analytics, 2020.
- Program Co-chair, INFORMS Workshop on Data Science, 2019.
- Cluster Chair, INFORMS Annual Meeting 2013, 2017, 2018.
- Publicity Chair, International Conference for Smart Health (ICSH), 2017 and 2018.
- Publicity Chair, INFORMS Workshop on Data Science, 2017 and 2018.
- Doctoral Consortium Chair, IEEE International Conference on Healthcare Informatics (ICHI), 2016.
- Review Editor, Journal of the Association for Information Science and Technology (JASIST), 2018-Present.
- Associate Editor, Decision Support Systems (DSS), 2021-Present.
- Associate Editor, Electronic Commerce Research and Applications (ECRA), 2020-Present.
- Associate Editor, Information Technology and Management, 2020-Present.
- Associate Editor, International Conference on Information Systems (ICIS), 2016, 2018, and 2020.
- Guest Associate Editor, Information Systems Research (ISR), 2022-Present.
- Special Issue Editors for IEEE Intelligent Systems (2015), ECRA (2020), ACM Trans. on Management Information Systems (2020).
- Panelist, National Science Foundation, 2015, 2020.

- Program Committee Member for Workshop on Information Technologies and Systems (WITS), INFORMS Data Science Workshop (DS), Conference on Information Systems and Technology (CIST), China Summer Workshop on Information Management (CSWIM), International Conference on Social Computing, Behavioral-Cultural Modeling, & Prediction (SBP), International Conference on Electronic Commerce (ICEC), IEEE International Conference on Healthcare Informatics (ICHI), IEEE International Conference on Social Computing (SocialCom), International Conference for Smart Health (ICSH), ACM KDD Big Scholar Workshop.
- Ad-hoc journal reviewer for ACM Transactions on Intelligent Systems and Technology, ACM Transactions on Information Systems, ACM Transactions on Management Information Systems, Annals of Operations Research, Communications of the Association for Information Systems, Computers in Biology and Medicine, Decision Sciences, Decision Support Systems, IEEE Intelligent Systems, IEEE Transactions on Computational Social Systems, IEEE Transactions on Engineering Management, IEEE Transactions on Systems, Man and Cybernetics: Systems, Information and Management, Information Processing and Management, Information Systems and e-Business Management, Information Systems Research, International Journal of Electronic Commerce, International Journal of Medical Informatics, Journal of the Association for Information Systems, Journal of Information Science, Journal of Management Information Systems, Journal of Medical Internet Research, Journal of Operations Management, INFORMS Journal on Computing, MIS Quarterly, Management Science, Neural Computing and Applications, Nicotine and Tobacco Research, Scientometrics. Simulation, Social Network Analysis and Mining.
- Ad-hoc conference reviewer for ACM Conference on Knowledge Discovery and Data Mining (KDD), International Conference on Information Systems for Crisis Response & Management (ISCRAM), Hawaii International Conference on System Sciences (HICSS), Pacific Asia Conference on Information Systems (PACIS).
- Faculty Director, Full-time MSBA Program, Tippie College of Business. 2020-Present.
- Member, Student Recruitment and Admission Committee, IGPI. 2021-Present.
- Member, MBA Committee, Tippie College of Business. 2020-Present.
- Member, Research Steering Committee, Tippie College of Business. 2015-2017, 2018-2019.
- Member, Information Science Track Executive Committee, IGPI. 2017-2020.
- Member, Undergraduate Program Committee, Dept. of Management Sciences. 2017-2019.
- Member, Graduate Program Committee, Dept. of Management Sciences. 2012-2015.
- Member, Research Committee, Dept. of Management Sciences. 2018-2019.
- Member, Faculty Recruitment Committee, Dept. of Management Sciences. 2013, 2015, 2017.
- Coordinator, Tippie Brown-bag Series on Computational Data Science. 2018.
- Coordinator, Dept. of Management Sciences Seminars. 2012-2013.

STUDENT ADVISING

- PhD students advising (programs, years of degree conferral, and current positions):
 - Anindita Bandyopadhyay (Business Analytics)
 - Xiangyu Wang (Informatics, expected in 2022)
 - Sulyun Lee (Informatics, expected in 2022)
 - Xi Wang (Informatics, 2017. Associate Prof., Central Univ. of Finance & Economics, China)
 - Kristina Bigsby (Informatics, 2018. co-advised with Prof. Jeff Ohlmann. Lecturer, Univ. of Iowa)
 - Zhiya Zuo (Informatics, 2019. Assistant Prof. of Information Systems, City Univ. of Hong Kong)
 - John Rios Rodriguez (Business Analytics, 2021. Lecturer, University of Georgia)
- MS and undergraduate students advising (programs, years of degree conferral, and placements):
 - Shiyao Wang (MS in Computer Science, 2016. Spotify)
 - Apoorva Joshi (MS in Electrical and Computer Engineering, 2018. Elastic)
 - Amanda Aird (MSBA, Boe Research Fellowship, 2021, Univ. of Colorado)
 - Sunyan Fu (BBA, 2014, Mayo Clinic)

- Shuai Alice Zheng (BBA, 2017, MathWorks)
 Shangguan Wang (BBA, Iowa Center for Research by Undergrad Fellowship, 2018, Accenture)
- PhD committee members (programs, years of degree conferral, and placements if available):
 - Mike Rechenthin (Management Sciences, 2014. tastytrade, Inc.)
 - Charisse Madlock-Brown (Informatics, 2014. University of Tennessee)
 - Chao Yang (Computer Science, 2015. Amazon.com, Inc.)
 - Senay Yasar Saglam (Management Sciences, 2015)
 - Yang Zhang (Political Science, 2016. Southwest Jiaotong University)
 - Emily White (Geography, 2016)
 - Wenjun Wang (Management Sciences, 2016. University of Arkansas Little Rock)
 - Yuanyang Liu (Management Sciences, 2019. University of Tennessee)
 - Amin Khezerlou (Management Sciences, 2019. Northern Illinois University)
 - Huyen T. Le (Computer Science, 2019. FDA)
 - Michael Redmond (Business Analytics, 2020. University of Michigan)
 - Ziqian Song (Computer Science at Virginia Tech, 2020, University of Scranton)
 - Zhong Zheng (Data Science at City University of Hong Kong, 2021)

CAMPUS AND COMMUNITY ACTIVITIES

- President – Graduate Student Association of IST, Penn State University. 2010-2011
- Board member – Chinese Friendship Association, Penn State University. 2008-2009