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RESEARCH INTERESTS

Data science, social networks and social media, health analytics, people analytics, organizational and supply chain networks, graph learning.

PROFESSIONAL EXPERIENCE

- Professor, Department Head and Tippie Research Fellow 2023 - Present
Associate Professor (with Tenure) and Tippie Research Fellow 2018 - 2023
Assistant Professor (Tenure-track) 2012 - 2018
Department of Business Analytics, Tippie College of Business
Affiliated Faculty Member of the Interdisciplinary Graduate Program in Informatics (IGPI)
The University of Iowa, Iowa City, IA.
- Visiting Researcher 2019 - 2020
Institute of Automation, Chinese Academy of Sciences
Beijing, China.
- Graduate Research and Teaching Assistant 2007 - 2012
College of Information Sciences and Technology (IST)
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, 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

- Top Cited Article of 2022-2023
Journal of the Association for Information Science and Technology.
- Ambassador Award (2024)
Journal of Operations Management.
- MSBA Instructor of the Year (December 2023)
Tippie College of Business, The University of Iowa.
- Charles A. Taff Research Excellence Award (2023)
Tippie College of Business, The University of Iowa.

- MSBA Instructor of the Year (December 2022)
Tippie College of Business, The University of Iowa.
- Top Cited Article of 2021-2022
Journal of the Association for Information Science and Technology.
- Top Downloaded Article of 2021
Journal of the Association for Information Science and Technology.
- SSRN Top Ten Download List (February 2021)
SSRN Information and Library Science Research Network.
- Top Cited Article (2019-2020)
Journal of Operations Management.
- Honor Thesis Mentor Award (2019)
Tippie Business Honor Society, The University of Iowa.
- Best Paper Award (2017)
INFORMS Data Science Workshop.
- 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)
Penn State University.

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

- [J.49] Namdar, J., Blackhurst, J., Song, S., and Zhao, K. "Cascading Disruptions: Impact of Network Features and Nexus Supplier Predictions," *Journal of Supply Chain Management* (forthcoming).
- [J.48] Wang, Xiangyu*, Zhao, K., Amato, M.S., Graham, A.L., Stanton, C.A., and Shuter, J. "Jumpstarting Online Interactions to Promote Smoking Cessation Among People with HIV: The Role of Seed Users in Nurturing an Online Health Community," *Annals of Behavioral Medicine* (58:2), 2024, pp 122-130.
- [J.47] Hu, Y., Zhang, P., Zhao, K., and Zhang, S. "Disruption Recovery for the Pickup and Delivery Problem with Time Windows--A Scenario-based Approach for Online Food Delivery," *Computers and Operations Research* (159), 2023, pp 106337.
- [J.46] Yang, Y., Zhang, C., Zhao, K., and Wang, Q. "The Shifting Role of Information Processing and Management in Interdisciplinary Development: From a Collection of Tools to a Crutch," *Information Processing & Management*, (60:4), 2023, pp 103388.
- [J.45] Gao, G., Liu, H., and Zhao, K. "Live Streaming Recommendations Based on Dynamic Representation Learning," *Decision Support Systems*, (169), 2023, pp 113957.
- [J.44] Yang, Y., Zhao, K., Zeng, D. and Jensen, J. "Time-varying effects of search engine advertising on sales--An empirical investigation in E-commerce," *Decision Support Systems* (163), 2022, pp 113843.
- [J.43] Zhao, K., Wu, J and Neumann, D. "Business Analytics for Social Goods." *Electronic Commerce Research and Applications* (54: July-August) 2022, pp 101168.
- [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* (34:4), 2022, pp 1940-1957.
- [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. **(Top downloaded article in Journal of the Association for Information Science and Technology for 2021. Top Cited Article in Journal of the Association for Information Science and Technology, 2022-2023.)**
- [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. **(Top cited article 2021-2022 in Journal of the Association for Information Science and Technology)**
- [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.36] Gao, G., Liu, H., Wang, C., Yang, L., and Zhao, K. "Externality-based Recommendations for Online Live Karaoke Platforms," *The 32nd Workshop on Information Technologies and Systems (WITS)*, Denmark, 2022.
- [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.

PAPERS UNDER REVIEW

- [R.6] Zhang, P., He, S., Zhang, W., Zhao, K., and Zeng, D. "Modeling the Co-diffusion of Competing Memes in Online Social Networks," R&R.
- [R.5] Qu, X., Wang, Xiangyu*, Jiang, Z., and Zhao, K. "Social Influence and the Co-diffusion of Information and Behaviors on Online Social Networks," R&R.
- [R.4] Gao, G., Liu, H., Wang, C., Yang, L., and Zhao, K. "Proactively Considering Future Externality for Recommendations in Live-Streaming Platforms", R&R.
- [R.3] Rios, J.*, Zhao, K., and Street, N., and Blackhurst, J. "Stock Price Movement Cross-Predictability in Supply Chain Networks," R&R.
- [R.2] Bai, J., Li, L., Zhao, K., Zeng, D., Li, Q., and Zu, Q. "Graph Representation Learning Based on Cognitive Spreading Activations," R&R.
- [R.1] Lin, Q., Zhao, K., Wang, X*., and Sheng, O. "Turning to the Blind Side: Leveraging Relative Interests for Reciprocal Recommendations," R&R.

WORKING PAPERS

- [W.4] "Assembling Teams at the Knowledge Frontier: How Research Team Knowledge Continuity Supports Innovation Success in Combating COVID-19."

- [W.3] "A Hybrid Deep Learning Model for Dynamic Stock Movement Predictions based on Supply Chain Networks."
- [W.2] "Hierarchy2vec--Representation Learning in Hierarchical Collaboration Networks for Team Performance Prediction."
- [W.1] "Network Influence on User Role Dynamics in Online Health Communities."

CITATION

Google Scholar: total citation 3,078; h-index 26; i10-index 47 (as of May 2024).

GRANTS

- Dime la VerDAD (Verify, Debunk, and Disseminate).
National Institute of Health, R01 MD018730. Co-I. \$702,357. 2023-28.
- Libraries as Resilience Hubs: Assessing Social Impacts and Learning from Best Practices.
Institute of Museum and Library Services (LG-254845-OLS-23). Co-I. \$498,241. 2023-26.
- Understanding Gender Gaps in Academic Science through the Lens of Topic Fit: An Interdisciplinary Investigation Using a Big Data Approach.
National Science Foundation (2218662). Co-PI. \$273,000. 2022-24.
- Public Libraries for Disaster Resilience: Assessing Libraries' Community Impacts in Times of Climate and Socio-Economic Crises.
University of Iowa Jumpstarting Tomorrow Grant. Co-PI. \$150,000. 2021-22.
- Understanding Gender Gaps in Academic Science through the Lens of Topic Fit: An Interdisciplinary Investigation.
Tippie College of Business Research Excellence Grant. Co-PI. \$6,000. 2021-22.
- Effects of Supply Chain and Board Membership Networks on Firm Performances
Tippie College of Business Research Excellence Grant. Co-PI. \$6,000. 2020-21.
- In Whom We Trust: How Entrepreneurs' Communication Moderates the Effect of Their Unmet Promises on Funders Reactions.
Tippie College of Business Research Excellence Grant. Co-PI. \$6,000. 2020.
- Support for the Doctoral Consortium Program at the 2016 IEEE International Conference on Healthcare Informatics.
National Science Foundation, Award 1644419. PI. \$23,000. 2016-17.
- Health Knowledge Discovery and Personalized Treatment from Online Social Media.
National Natural Science Foundation of China, Award 71572013. Co-PI. CNY 470,000. 2016-19.
- Social Dynamics of Substance Use in Online Social Networks for Smoking Cessation.
National Institute of Health, R01 CA192345. \$468,382. 2014-16.
As a co-PI for this multiple-PI project (Graham and Zhao).
- Old Gold Fellowship.
The University of Iowa. PI. 2013.
- Network Science Exploration Research Grant.
Penn State University. PI. \$4,000. 2010.

SELECTED TALKS AND PRESENTATIONS

- [T.36] "Jumpstarting Online Interactions to Promote Smoking Cessation—Analyzing the Role of Seed Users in an Online Health Community." *INFORMS Annual Meeting*, Indianapolis, IN, 2022.

- [T.35] "Predicting Stock Price Movements--Machine Learning Approaches based on Inter-firm Networks." *Robinson College of Business, Georgia State University*, 2022.
- [T.34] "Predicting NFL Team Performance via Hierarchical Team Embeddings." *INFORMS Annual Meeting*, Anaheim, CA, 2021.
- [T.33] "Understanding the Spread of Misinformation on Social Media--the Effects of Topics and a Political Leader's Nudge." *INFORMS Annual Meeting*, Anaheim, CA, 2021.
- [T.32] "From Cyberspace to Physical Space--Mining and Integrating Online and Offline Data for Insights." *Tezign Shanghai Ltd.*, Online, 2021.
- [T.31] "A Dynamic GNN Model for Stock Price Movement Prediction with Supply Chain Networks." *INFORMS Annual Meeting*, Online, 2020.
- [T.30] "The Role of Social Influence in the Co-diffusion of Information and Behaviors in Online Social Networks." *INFORMS Annual Meeting*, Online, 2020.
- [T.29] "Understanding Research Collaborations During the Covid-19 Pandemic." *INFORMS Annual Meeting*, Online, 2020.
- [T.28] "From Cyberspace to Physical Space--Mining and Integrating Online and Offline Data for Insights." *Zhejiang University*, China, 2020.
- [T.27] "The Role of Prospective Social Ties in Job Placements." *China Summer Workshop on Information Management (CSWIM'19)*, Shenzhen, China, 2019.
- [T.26] "Predicting Stock Price Movements via Multi-relational Inter-firm Networks." *China Summer Workshop on Information Management (CSWIM'19)*, Shenzhen, China, 2019.
- [T.25] "Predicting Stock Price Movements via Inter-firm Networks." *INFORMS Annual Meeting*, Seattle, WA, 2019.
- [T.24] "Predicting User Activities in Online Health Communities with Deep Learning." *INFORMS Annual Meeting*, Seattle, WA, 2019.
- [T.23] "People Analytics: What Factors Lead to Better Placement?--A Case of Faculty Hiring." *INFORMS Annual Meeting*, Phoenix, AZ, 2018.
- [T.22] "Social Support and User Churn Prediction for Online Health Communities--A Trajectory-based Deep Learning Method." *INFORMS Annual Meeting*, Phoenix, AZ, 2018.
- [T.21] "Mining User-generated Content in an Online Smoking Cessation Community to Identify Smoking Status--A Machine Learning Approach." *INFORMS Annual Meeting*, Phoenix, AZ, 2018.
- [T.20] "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.19] "Social Media Data Mining and Network-based Simulations." *Wuhan University Summer School on Business Data Analytics*, China, 2018.
- [T.18] "Online and Off the Web--Mining Online Data for Offline Behaviors." *Tsinghua University*, 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.

SELECTED MEDIA 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.
- "University of Iowa Researchers Develop New Model to Predict Which Universities Student Athletes Will Commit to." *INFORMS News*, Dec. 12, 2017.
- "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.
- "Algoritmo "desvende" o que leva um filme a fazer sucesso e dar lucro", *Gazeta do Povo* (Portugal), June 26, 2015.
- "Data-Mining zeigt Erfolgsfaktoren für Kinofilme", heise online (Germany), June 24, 2015.
- "Box Office Predictions from Robots Find A-List Actors Hurt Film Profits." *International Business Times*, June 24, 2015.
- "Análise de big data desvende o segredo dos filmes de sucesso", *Estadao* (Brazil), June 22, 2015.
- "Updating the Dating Game" *Cosmopolitan*, March, 2014.
- "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.
- "Love Connection." *ACM TechNews*, Dec 9, 2013.
- "An Algorithm to Help You Find Best Dating Partner." *The Times of India*, Dec 7, 2013.
- "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.

TEACHING

Average student evaluation score **5.49** out of 6.

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

SERVICE

External Leadership

- Emerging Topics Co-chair, INFORMS Annual Meeting, 2022.
- Conference Co-chair, INFORMS Workshop on Data Science, 2020.
- Program Co-chair, AMCIS SIGBPS Workshop on Blockchain and Financial Analytics, 2020.
- Program Co-chair, INFORMS Workshop on Data Science, 2019.
- Publicity Chair, International Conference for Smart Health, 2017 and 2018.
- Publicity Chair, INFORMS Workshop on Data Science, 2017 and 2018.
- Chair, INFORMS Artificial Intelligence Section, 2014-2016.
- Chair of the Artificial Intelligence Cluster, INFORMS Annual Meeting 2013, 2017, 2018.
- Doctoral Consortium Chair, IEEE International Conference on Healthcare Informatics, 2016.

Editorship

- Associate Editor, Information and Management, 2022-Present.
- Guest Associate Editor, Information Systems Research, 2021-Present.

- Review Editor, Journal of the Association for Information Science and Technology, 2018-Present.
- Associate Editor, Decision Support Systems, 2021-2023.
- Associate Editor, Electronic Commerce Research and Applications, 2020-Present.
- Associate Editor, Information Technology and Management, 2020-Present.
- Special Issue Editor for
 - Information Processing and Management (2022)
 - Electronic Commerce Research and Applications (2020)
 - ACM Trans. on Management Information Systems (2020)
 - IEEE Intelligent Systems (2015)
- Associate Editor, International Conference on Information Systems (ICIS), 2016, 2018, and 2021.

Grant Review Panels

- National Science Foundation, 2015 and 2020.

Paper Review

- Reviewer for more than 30 journals, including
 - ACM Transactions (various)
 - Decision Sciences
 - IEEE Transactions (various)
 - Information Processing and Management
 - Information Systems Research
 - INFORMS Journal on Computing
 - Journal of the Association for Information Systems
 - Journal of Management Information Systems
 - Journal of Operations Management
 - MIS Quarterly
 - Management Science
 - Production and Operations Management
 - Scientometrics
- Program Committee Member for
 - Workshop on Information Technologies and Systems
 - INFORMS Data Science Workshop
 - Conference on Information Systems and Technology
 - China Summer Workshop on Information Management
 - International Conference on Social Computing Behavioral-Cultural Modeling, & Prediction,
 - International Conference on Electronic Commerce
 - IEEE International Conference on Healthcare Informatics
 - IEEE International Conference on Social Computing
 - International Conference for Smart Health
 - ACM KDD Big Scholar Workshop
- Ad-hoc Conference Reviewer for
 - ACM Conference on Knowledge Discovery and Data Mining (KDD)
 - International Conference on Information Systems for Crisis Response & Management
 - Hawaii International Conference on System Sciences
 - Pacific Asia Conference on Information Systems

University, College, and Department Service

- Faculty Director, Full-time MS in Business Analytics, Dept. of Business Analytics. 2020-2023.
- Chair, Faculty Recruiting Committee, Dept. of Business Analytics. 2022-2023.
- Member, Student Recruitment and Admission Committee, IGPI. 2021-Present.
- Member, MBA Committee, Tippie College of Business. 2020-2022.
- Member, Research Committee, Dept. of Management Sciences. 2018-2019.

- Member, Information Science Track Executive Committee, IGPI. 2017-2020.
- Member, Undergraduate Program Committee, Dept. of Management Sciences. 2017-2019.
- Member, Research Steering Committee, Tippie College of Business. 2015-2017, 2018-2019.
- Member, Research Scientist Recruiting Committee, College of Nursing. 2014-2015.
- Member, Graduate Program Committee, Dept. of Management Sciences. 2012-2015.
- 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.

Professional Membership

- INFORMS, Association of Information Systems, IEEE, ACM.

ADVISING

PhD Student Advising (programs and years of degree conferral)

- *Seyong Ha* (Business Analytics)
- *Anindita Bandyopadhyay* (Business Analytics)
- *Xiangyu Wang* (Informatics, 2022)
Dissertation: “From Online Engagement to Offline Health Outcomes--Analyzing User Behaviors in Online Health Communities.”
Placement: Tenure-track faculty member, University of New South Wales Business School, Sydney.
- *Sulyun Lee* (Informatics, 2022)
Dissertation: “Understanding and Predicting Team Performance--A Collaboration Perspective.”
Placement: Senior Data Scientist, Castell Health, Salt Lake City, UT.
- *John Rios Rodriguez* (Business Analytics, 2021)
Dissertation: “Predicting Stock Price Movements in Supply Chain Networks.”
Placement: Lecturer, University of Georgia, Athens, GA.
- *Zhiya Zuo* (Informatics, 2019)
Dissertation: “Analyzing Collaboration using Large-Scale Scholarly Data.”
Placement: Assistant Professor of Information Systems, College of Business, City Univ. of Hong Kong.
- *Kristina Bigsby* (Informatics, 2018). Co-advised with Prof. Jeff Ohlmann
Dissertation: “From Hashtags to Heismans--Social Media and Networks in College Football Recruiting.”
Placement: Lecturer, Department of Business Analytics, University of Iowa.
- *Xi Wang* (Informatics, 2017)
Dissertation: “Engagement of Users in Online Health Communities--A Social Support Perspective.”
Placement: Assistant Professor, School of Information, Central Univ. of Finance & Economics, Beijing.
Promoted to Associate Professor in 2021.

PhD Committee Members (programs, years of degree conferral and placement if available)

- *Junho Yoon* (Business Analytics, 2024, University at Buffalo)
- *Bang An* (Business Analytics, 2024, Georgia Institute of Technology)
- *Chengyue Huang* (Business Analytics, 2024, Bloomberg)
- *Sadjad Anzabi Zadeh* (Business Analytics, 2023, Duke Energy Company)
- *Shenghao Wang* (Business Analytics, 2023)
- *Min Zhang* (Informatics, 2023, Communication University of China)
- *Haoyi Xiong* (Geography, 2022)
- *Maryam Rahmani Moghaddam* (Business Analytics, 2022, Arizona State University)
- *Jafar Namdar* (Business Analytics, 2022, MIT)
- *Morgan Swanson* (Epidemiology, 2022)

- *Sadia Farzana* (Economics, 2022, Louisiana State University)
- *Zhong Zheng* (Data Science from City University of Hong Kong, 2021)
- *Ziqian Song* (Computer Science from Virginia Tech, 2020, University of Scranton)
- *Michael Redmond* (Business Analytics, 2020, University of Michigan)
- *Huyen T. Le* (Computer Science, 2019, FDA)
- *Amin Khezerlou* (Management Sciences, 2019, Northern Illinois University)
- *Yuanyang Liu* (Management Sciences, 2019, University of Tennessee)
- *Wenjun Wang* (Management Sciences, 2016, University of Arkansas Little Rock)
- *Emily White* (Geography, 2016)
- *Yang Zhang* (Political Science, 2016, Southwest Jiaotong University)
- *Senay Yasar Saglam* (Management Sciences, 2015)
- *Chao Yang* (Computer Science, 2015, Amazon.com, Inc.)
- *Charisse Madlock-Brown* (Informatics, 2014, University of Tennessee)
- *Mike Rechenthin* (Management Sciences, 2014, tastytrade, Inc.)

MS Student Advising (programs, years of degree conferral and placement)

- *Sherzod Bobojonov* (MS in Business Analytics)
- *Arun Ganapathy* (MS in Business Analytics, 2024)
- *Mingyue Sun* (MS in Business Analytics, 2022, University of Iowa Hospitals & Clinics)
- *Amanda Aird* (MS in Business Analytics, 2021, University of Colorado Boulder)
- *Apoorva Joshi* (MS in Electrical and Computer Engineering, 2018, Elastic)
- *Shiyao Wang* (MS in Computer Science, 2016, Spotify)

Undergraduate Student Advising (programs, years of degree conferral and placement)

- *Shangguan Wang* (BBA, 2018, Accenture)
- *Shuai Alice Zheng* (BBA, 2017, MathWorks)
- *Sunyang Fu* (BBA, 2014, Mayo Clinic)

Other Mentoring

- Faculty Mentor, Doctoral Consortium of Americas Conference on Information Systems, August 2020, online.

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