

KANG ZHAO

324 IST Building
University Park, PA 16802, USA.
Phone: +1 (814) 441-7753 (Cell)
kangzhao@psu.edu <http://www.kangzhao.net>

EDUCATION

- The Pennsylvania State University, University Park, PA, USA.
Ph.D. candidate, Information Sciences and Technology (IST) (Expected in May 2012.).
Thesis title: A multi-level analysis of information flows and influence in business & social networks.
Thesis committee: Dr. John Yen (chair), Dr. Akhil Kumar, Dr. Raka Albert, and Dr. C. Lee Giles.
- Santa Fe Institute, Santa Fe, NM, USA.
Complex Systems Summer School, 2010.
Awarded full financial support (Admission rate: 1 out of 6~10).
- Carnegie Mellon University, Pittsburgh, PA, USA.
Summer Institute on Computational Analysis of Social & Organizational Systems, 2009.
- Eastern Michigan University, Ypsilanti, MI, USA.
M.S., Computer Science, 2006.
- Beijing Institute of Technology, Beijing, China.
B.E. (with Honor), Electrical and Information Engineering, 2003.

RESEARCH AND PROFESSIONAL EXPERIENCE

- Graduate Research Assistant 2007 - Present
College of IST, Penn State University.
- Programmer/Intern 2006 - 2007
The LinuxBox Corporation, Ann Arbor, MI, USA.
- Graduate Research Assistant 2004 - 2006
Institute for Geospatial Research and Education, Eastern Michigan University.
- Intern 2004
Motorola (China) Electronics Ltd. Beijing, China.
- Trainee 2003
Siemens International Students Circle, Siemens Limited China, Beijing, China.

TEACHING EXPERIENCE

- Graduate Teaching Assistant 2011
IST 516 Web and Information Retrieval, Penn State University.
- Guest Lecturers 2010 and 2011
“Analyzing Multidimensional Networks”
at IST 594B Social Network Analysis and Agent-based Modeling, Fall 2011.
“Social Network Analysis”
at IST 511 Information Management (a required course for IST graduate students), Fall 2010.
- Student Mentor 2008 and 2011
Intelligent Agent Laboratory, Penn State University.
Mentored two junior Ph.D. students and one undergraduate student in three research projects.

Holman Learning Center, Eastern Michigan University.

Tutored undergraduate students in mathematics and computing courses.

REFEREED JOURNAL PUBLICATIONS

- [J.8] **Zhao, K.**, Kumar, A., and Spaziani, M. "Who Blogs What: Understanding Publishing Behaviors of Bloggers," conditionally accepted by *World Wide Web*.
- [J.7] **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* (Accepted. Has been published online ahead of print).
- [J.6] Ngamassi, L.-M., **Zhao, K.**, Maldonado, E., Maitland, C., and Tapia, A. "Humanitarian Information Exchange Network: Why Do International Humanitarian Organizations Collaborate?" *International Journal of Society Systems Science (IJSSS)* (3:4) 2011, pp 362-384.
- [J.5] **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.4] Ngamassi, L.-M., 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," *International Journal of Information Systems and Social Change* (2:2) 2011, pp 1-25.
- [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., Maitland, 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 Research* (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.

MANUSCRIPTS IN PREPARATION

- [M.2] **Zhao, K.**, Greer, G.E., Qiu, B., Caragea, C., Mitra, P., Wu, D., Portier, K., and Yen, J. "Who are the influential users in online health communities?--A new metric based on sentiment influence."
- [M.1] **Zhao, K.**, and Kumar, A. "Design of a Tool for Topological Analysis of Robustness of a Supply Network (TARSUN)."

FULL PAPERS IN REFEREED CONFERENCES AND WORKSHOPS

- [F.10] **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 (**Presenter**).
- [F.9] 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.

- [F.8] **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. **(Presenter)**.
- [F.7] **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. **(Presenter)**.
- [F.6] Tapia, A.H., Tchouakeu, L.-M.N., 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.
- [F.5] 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.
- [F.4] **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. **(Presenter)**.
- [F.3] **Zhao, K.**, Yen, J., Maitland, C., Tapia, A., and Tchouakeu, L.-M.N. "A Formal Model for Emerging Coalitions under Network Influence in Humanitarian Relief Coordination," *Proceedings of the Spring Simulation Multi-conference*, San Diego, CA, 2009, Article No.10. **(Presenter)**.
- [F.2] **Zhao, K.**, Maitland, C., Tchouakeu, L.-M.N., Orendovici, R., Tapia, A., and Yen, J. "Emergence of Collaborative Projects and Coalitions: a Framework for Coordination in Humanitarian Relief," *The Second World Congress on Social Simulation (WCSS'08)*, George Mason University, VA., 2008. **(Presenter)**.
- [F.1] Xie, Y., **Zhao, K.**, and Wagner, T. "EnDURE: Environmental Disaster Urban Recovery and Evaluation Model," *Annual Conference of the North American Association for Computational Social and Organizational Sciences (NAACSOS'06)*, Notre Dame, IN, 2006. **(Presenter)**.

SHORT PAPERS AND POSTERS IN REFEREED CONFERENCES

- [S.4] **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," *Advances in Social Computing-Proceedings of the 2010 International Conference on Social Computing, Behavioral Modeling & Prediction (SBP)* Springer, Bethesda, MD, 2010, pp. 265-272. **(Presenter)**.
- [S.3] **Zhao, K.**, Ngamassi, L.-M., Yen, J., Maitland, C., and Tapia, A. "Exploring Assortative Patterns in Multi-dimensional Inter-organizational Networks: A Case Study of the Humanitarian Relief Sector," *2009 North American Association for Computational Social and Organization Sciences Annual Conference*, Tempe, Arizona, USA, 2009. **(Presenter)**.
- [S.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.
- [S.1] Xie, Y., Batty, M., and **Zhao, K.** "Simulating an Emergent Urban Form of Desakota in China," in: *The 9th International Conference on Computers in Urban Planning & Urban Management*, London, 2005.

PRESENTATIONS AND TALKS

- [P.5] **Zhao, K.** "Analyzing the Robustness of Supply-chain Networks with Heterogeneous Nodes," *Network Science Seminar Series*, Penn State University, 2011.

- [P.4] **Zhao, K.**, Kumar, A., and Yen, J. "Robustness of Heterogeneous Supply Networks--New Metrics and Model," *2010 American Physical Society March Meeting*, Portland, OR, 2010. (**Presenter**).
- [P.3] **Zhao, K.** "A Formal Model for Emerging Coalitions under Network Influence in Humanitarian Relief Coordination", as an invited presenter at *IST 501*, Penn State University, 2009.
- [P.2] **Zhao, K.** "Robustness of Heterogeneous Supply Networks against Random and Targeted Disruptions," *Complex Systems Advanced Academic Workshop (CSAAW) First Annual Complexity Conference*, Ann Arbor, MI, USA, 2009.
- [P.1] **Zhao, K.** "Emergence of Collaborative Projects and Coalitions: A Framework for Coordination in Humanitarian Relief," *IST Symposium*, Penn State University, 2008.

RESEARCH GRANT

Network Science Exploration Research Grant.

2010 - 2011

Awarded by Penn State University (\$4,000).

A competitive research grant for graduate students (5 awards from about 30 grant proposals).

Work resulted in publications [J.3], [J.5], and [F.4].

HONORS AND AWARDS

- Conference Travel Scholarship (2010 and 2011)
International Conference on Social Computing, Behavioral Modeling and Predication.
- Graduate Student Travel Award (2007, 2009, and 2011)
College of IST, Penn State University.
- R.W. Graham Endowed Graduate Fellowship (2007)
College of IST, Penn State University.
- The Honor Society of Phi Kappa Phi (2007)
- Graduate Achievement Award (2006)
Department of Computer Science, Eastern Michigan University.
- Graduate Student Travel Grant (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)
Beijing Institute of Technology.
- First-class Renmin Fellowship (1999-2003)
Beijing Institute of Technology consecutively for 4 years. Awarded to the top 10% of students.
- Beijing Institute of Technology Top Honor Xu Teli Fellowship (2001)
Beijing Institute of Technology. 30 awardees from about 20,000 students.
- Leida Technology Progress Fellowship (2001)
Beijing Institute of Technology.
- Outstanding Student of Beijing Institute of Technology (2000)
Beijing Institute of Technology.

SERVICE

- Graduate student representative, Graduate Advising Committee at College of IST. 2010-2011.
- Graduate student representative, Faculty Recruitment Committee at College of IST. 2010.

- Journal reviewer for Simulation, IEEE Transactions on Engineering Management, Information Systems and e-Business Management, International Journal of Information Systems and Social Change.
- Conference reviewer for the International Conference on Social Computing, Behavioral-Cultural Modeling & Prediction (SBP), the Hawaii International Conference on System Sciences (HICSS), and the International Conference on Information Systems for Crisis Response & Management (ISCRAM).
- Panelist for the Internet Research Panel at the 2011 IST Symposium.
- Panel Chair and Organizing Committee Member for the 2009 IST Symposium.

PROFESSIONAL MEMBERSHIPS

- Association for Computing Machinery.
- Association for Information Systems.
- Computational Social Science Society of America.
- Institute of Electrical and Electronics Engineers.
- Institute for Operations Research and the Management Sciences.

CAMPUS AND COMMUNITY ACTIVITIES

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| • President (elected) – Graduate Student Association of IST. | 2010-2011 |
| • Executive board member – Chinese Friendship Association, Penn State University. | 2008-2009 |
| • President – Undergraduate Class at Beijing Institute of Technology. | 1999-2003 |
| • Volunteer – the 21st FISU World University (Universiade) Games at Beijing. | 2001 |

January 10, 2012