Xuan Wei

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EDUCATION

2015 – 2020 (expected)	Eller College of Management, University of Arizona, US Doctor of Philosophy (Ph.D.) Advisor: Dr. Daniel Dajun Zeng Major: Management Information Systems Minor: Statistics
2010 – 2014	School of Mathematical Science, Shanghai Jiao Tong University, China Bachelor's Degree (B.S.) Major: Mathematics and Applied Mathematics Minor: Computer Science

RESEARCH INTERESTS

Applications	– Crowdsourcing, Crowd Intelligence, Crowd Computing – Fake News Detection – Intention Mining in Social Media
Methods	– Statistical Machine Learning – Probabilistic Modeling and Inference – Deep Learning and Deep Generative Models

DISSERTATION

Title: Data Science-Driven Crowd Intelligence and Its Business Applications

Committee Members: Dr. Daniel Dajun Zeng (Chair), Dr. Wei Chen (Member), Dr. Yong Ge (Member)

Dissertation Summary: Recent technological advances have facilitated the widespread use of hybrid systems that combine human and machine intelligence. Crowd, as one type of scalable human resource, plays a critical role in many high-impact real-world applications. My dissertation focuses on data science-driven crowd intelligence and applying it to business applications including high-quality data acquisition through microtask crowdsourcing and false news detection. Specifically,

- How to save the data acquisition cost and help the crowdsourcing platforms evaluate the crowd workers under the general multi-label scenarios?

- How to aggregate the crowdsourced answers by simultaneously combining the rich structured domain knowledge and high-dimensional data features?

- How to combine the crowd and machine intelligence to tackle the false news crisis?

SELECTED HONORS & AWARDS

2018	Best Paper Award, Workshop on Information Technologies and Systems (WITS), 2018
2017	Best Paper Award Runner-up, INFORMS Workshop on Data Science, 2017
2014	Outstanding Graduate of Shanghai (top 5%)
2013	National First Prize of China Undergraduate Mathematical Contest in Modeling
2013	Guanghua Scholarship, Shanghai Jiao Tong University

JOURNAL PUBLICATIONS

- Mingyue Zhang, **Xuan Wei**, Xunhua Guo, Guoqing Chen, and Qiang Wei (2019), "Identifying Complements and Substitutes of Products: A Neural Network Framework Based on Product Embedding." *ACM Transactions on Knowledge Discovery from Data (TKDD)*, 13(3).

- Mingyue Zhang, **Xuan Wei**, and Guoqing Chen (2018), "Maximizing the Influence in Social Networks via Holistic Probability Maximization." *International Journal of Intelligent Systems,* 33(10), 2038-2057.

JOURNAL PAPERS UNDER REVIEW

- **Xuan Wei**, Zhu Zhang, and Daniel Dajun Zeng, "Combining Crowd and Machine Intelligence to Detect False News in Social Media." Major Revision (1st Round) at *Management Information Systems Quarterly (MISQ)*.

- Jerry Luo, Susan Brown, **Xuan Wei**, Daniel Dajun Zeng, and Junming Yin, "Towards Better Learning from Crowd Labeling: A Variational Inference Approach." Major Revision (1st Round) at *Information Systems Research (ISR)* (selected to present on Special Issue Workshop).

- Zhu Zhang*, **Xuan Wei***, Xiaolong Zheng, and Daniel Dajun Zeng, "Detecting Product Adoption Intention via Multi-View Deep Learning." Major Revision (1st Round) at *INFORMS Journal on Computing (JOC)* (*equal contribution).

- Zhu Zhang*, **Xuan Wei***, Xiaolong Zheng, and Daniel Dajun Zeng, "Predicting Adoption Intention: A TPB-based Deep Learning Model." Under Review at *IEEE Transactions on Knowledge and Data Engineering (TKDE)* (*equal contribution).

- **Xuan Wei**, Mingyue Zhang, and Daniel Dajun Zeng, "Is Non-Persistent Social Status a More Useful Incentive Mechanism? Evidence from Yelp Elite Squad." Under Review (2nd Round) at *Decision Support Systems (DSS)*.

WORKING PAPERS

- **Xuan Wei**, Mingyue Zhang, Yong Ge, Daniel Dajun Zeng, "Composing Graphical Models and Neural Networks for Learning from Crowds." Targeted at *Information Systems Research (ISR).*

- **Xuan Wei**, Zhu Zhang, and Daniel Dajun Zeng, "Intention-Based Product Recommendation: An Attention Deep Model." Targeted at *INFORMS Journal on Computing (JOC).*

REFEREED CONFERENCE PROCEEDINGS

- **Xuan Wei**, Mingyue Zhang, Daniel Dajun Zeng (2019), "The Effectiveness of Non-Persistent Social Status as an Incentive Mechanism." *Pacific Asia Conference on Information Systems (PACIS)*, Xi'an, China.

- Dong Xie, Guanru Li, Bin Yao, **Xuan Wei**, Xiaokui Xiao, Yunjun Gao, and Minyi Guo (2016), "Practical Private Shortest Path Computation Based on Oblivious Storage." *International Conference on Data Engineering (ICDE)*, Helsinki, Finland.

WORKSHOPS (*indicates I was presenting the work)

- **Xuan Wei**, Daniel Dajun Zeng, Junming Yin, "From Multi-Class to Multi-Label: A Bayesian Approach to Annotation Aggregation in Crowdsourcing."
  - INFORMS Annual Meeting, Houston, TX, 2017*
  - Conference on Information Systems and Technology (CIST), Houston, TX, 2017*
  - INFORMS Workshop on Data Science, Houston, TX, 2017* (**Best Paper Award Runner-up**)

- **Xuan Wei**, Daniel Dajun Zeng, Scott Leischow, Analyzing the Impact of "The Real Cost" Campaign

- Society for Research on Nicotine and Tobacco (SRNT), Baltimore, MD, 2017*
- **Xuan Wei,** Mingyue Zhang, "Is Non-persistent Social Status a More Useful Incentive Mechanism? Evidence from Yelp Elite Squad."
  - INFORMS Annual Meeting, Phoenix, AZ, 2018
- Jerry Luo, **Xuan Wei**, Daniel Dajun Zeng, Junming Yin, "Towards Better Learning from Crowd Labeling: A Variational Inference Approach."
  - Workshop on Information Technologies and Systems (WITS), Phoenix, AZ, 2018 (**Best Paper Award**)
- **Xuan Wei**, Zhu Zhang, Daniel Dajun Zeng, "Distilling the Wisdom of Crowds for False News Detection in Social Media."
  - Conference on Information Systems and Technology (CIST), Seattle, WA, 2019 (scheduled)

PROFESSIONAL SERVICE

- Session Chair
  - INFORMS Annual Meeting, 2019
- Journal Reviewer
  - Management Information Systems Quarterly (MISQ)
  - Information Systems Research (ISR)
  - INFORMS Journal on Computing (JOC)
  - Decision Support Systems (DSS)
  - ACM Transactions on Management Information Systems (TMIS)
  - Social Network Analytics and Mining (SNAM)
  - IEEE Intelligent Systems
- Conference Reviewer
  - Neural Information Processing Systems (NIPS), 2018
  - International Conference on Artificial Intelligence and Statistics (AISTATS), 2017
  - International Conference on Information Systems (ICIS), 2017-2019
  - INFORMS Workshop on Data Science, 2017
  - European Conference on Information Systems (ECIS), 2018

TEACHING EXPERIENCE

- **Instructor**, University of Arizona, Summer 2019
  - MIS 373: Basic Operations Management (rating: 4.4 / 5.0)
- **Teaching Assistant**, University of Arizona, Fall 2015 – 2017
  - MIS 507: Software Design and Integration
- **Certificate**, University of Arizona (in progress, 2/3)
  - Certificate in College Teaching: 10-unit graduate program in learner-centered teaching

PROFESSIONAL AFFILIATIONS

- Institute for Operations Research and the Management Sciences (INFORMS), student member, since 2017
- Association for Information Systems (AIS), student member, since May 2019

WORKING EXPERIENCE

2015 – Current	Eller College of Management, University of Arizona, US
	Research Assistant
Summer 2015	Shanghai Touyuan Financial Information Service Co. Ltd.
	Technician

RELEVANT TECHNICAL SKILLS

- Programming Languages: Python, C/C++, Java, R, MATLAB, SAS, SQL, PL/SQL
- Databases: MySQL, Oracle, Redis, MongoDB
- Web Development: HTML, CSS, JavaScript, Bootstrap
- Visualization Tools: Gephi
- Deep Learning Programming Frameworks: Tensorflow, Keras
- Others: Latex, Git

REFERENCES

- **Daniel Dajun Zeng (Advisor & Dissertation Committee Chair)**
  Gentile Family Professor of MIS
  Department of Management Information Systems, University of Arizona
  Email: zeng@email.arizona.edu
  Mobile: +1(520)621-4614

- **Wei Chen (Dissertation Committee Member)**
  Assistant Professor of MIS
  Department of Management Information Systems, University of Arizona
  Email: weichen@email.arizona.edu
  Mobile: +1(520)626-8523

- **Yong Ge (Dissertation Committee Member)**
  Assistant Professor of MIS
  Department of Management Information Systems, University of Arizona
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  Mobile: +1(520)621-3927