

## Weili Zhang

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### Education:

Ph.D. Candidate	University of Oklahoma	Industrial and System Engineering	Expected 2018
M.S.	University of Oklahoma	Industrial and System Engineering	2015
B.S.	Southeast University	Logistics Management	2007

### Professional Experience:

3.2015-present	Graduate Research Assistant, Industrial and Systems Engineering, Univ of Oklahoma
8.2013-2.2015	Graduate Research Assistant, OU Data Science Lab, Univ of Oklahoma
12.2013-2.2015	Graduate Research Assistant, OU Transportation Lab, Univ of Oklahoma
8.2013-12.2013	Graduate Teaching Assistant, Industrial and Systems Engineering, Univ of Oklahoma
6.2011-6.2013	Demand Analyst, Schneider Electric

### Research Interests:

Mathematical optimization; resilience of infrastructure systems; network modeling; network interdependency; metaheuristics and evolutionary search; scaling up machine learning; risk-informed decision; applications of statistics, probability, and data mining.

### Research Publications:

#### Refereed Journals

- Zhang, W. and C.D. Nicholson. (2015). Optimal Network Flow: A Predictive Analytics Perspective. Submitted to *Journal of Heuristics*.
- Nicholson, C.D. and W. Zhang. (2015). Regression-based Relaxation for Network Flow Optimization. Submitted to *INFORMS Journal on Computing*.
- Wang, N. and W. Zhang. (2014) "Resilience-Based Pre-Disaster Risk Mitigation for Bridge Networks." Structural Safety. In review.
- Zhang, W. and N. Wang. Bridge Network Maintenance Optimization under Budget Constraint." *ASCE Journal of Infrastructure Systems*. In review. 2014
- Zhang, W. and C.D. Nicholson. (2014). Objective scaling ensemble approach for mixed integer programming. Submitted to *INFORMS Journal on Computing*.
- Zhang, W. and C.D. Nicholson. (2014). Metaheuristic search and the parameterized dynamic slope scaling procedure. Submitted to *Networks*.
- Zhang, W., and L., Zhao, Lattice Gas Model for Simulating Pedestrian Evacuation in the Dormitory Fire, *Journal of Safety and Environment*, 2010, 01, 169-172.

### **Working Papers**

- Zhang, W., N., Wang, C.D. Nicholson. Resilience-Based Post-Disaster Recovery Strategies for Highway Bridge Networks In Progress, 2015.
- Zhang, W., N., Wang, and C.D. Nicholson. Community Resilience Measurement Informed by Transportation Network and Residential Zones. In Progress, 2015.

### **Conference Proceedings**

- Wang, N. and Zhang, W. (2015) “Resilience-Based Risk Mitigation for Highway Bridge Networks” Abstract Submitted to *Symposium on the Reliability of Engineering Systems*, Taiwan (SRES-Taiwan), Taipei, October 21-24, 2015
- Zhang, W., Cao, M. and Wang, N (2015) “Travel Time Reliability Based Bridge Network Maintenance Optimization under Budget Constraint” *Proceedings, The 12th International Conference on Applications of Statistics and Probability in Civil Engineering*, ICASP12, Canada, July 12-15, 2015. Accepted
- Zhang, W., and Z., Yao, A Reformed Lattice Gas Model and Its Application in the Simulation of Evacuation in Hospital Fire, *Proc. 2010 IEEE Int. Conf. on Industrial Engineering and Engineering Management*, 2010, 1543-1547.