Wanyu Huang

wanyu.huang@jhu.edu • (515) 231-4185
Deptartment of Civil Engineering
Johns Hopkins University

Education

Johns Hopkins University *2018 – Present*
Ph.D Student, Department of Civil Engineering
Iowa State University *2016 – 2018*
M.S., Department of Industrial and Manufacturing Systems Engineering
Shanghai Jiao Tong University *2012 – 2016*
Bachelor of Engineering in Automation, School of Electronic Information and Electrical Engineering

Research Interests

System Science, Agent-based Modeling, Network Modeling, Social Network Analysis, Optimization

Publications

Analyzing Residential Weatherization Decisions using Hybrid Simulation Modeling.
Wanyu Huang, Caroline C. Krejci, Michael C. Dorneich, Ulrike Passe and Jacklin Stonewall. To appear in *Building Simulation*.

Energy Use and Weatherization Practices: Applications for Agent-Based Modeling to Support Vulnerable Populations.
Jacklin Stonewall, **Wanyu Huang**, Michael C. Dorneich, Caroline C. Krejci, Linda Shenk and Ulrike Passe. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting, Vol 62, Issue 1, 2018*.

Weatherization Adoption in A Multilayer Social Network: An Agent-based Approach.
Wanyu Huang, Caroline C. Krejci, Michael C. Dorneich and Ulrike Passe. *Computational Social Science Conference, 2017*. **Best Paper Finalist**.

Consumer-adoption Modeling of Distributed Solar Using an Agent-based Approach.
Anuj Mittal, **Wanyu Huang** and Caroline C. Krejci. *Computational Social Science Conference, 2017*.

A Genetic-Algorithm-Based Information Evolution Model for Social Networks.
Yanan Wang, Xiuzhen Chen, Jianhua Li and **Wanyu Huang**. *China Communications, Vol. 13, No. 12, pp. 234-249, Dec. 2016*.

Multiple Evidence Fusion based Information Diffusion Model for Social Network.
Yanan Wang, Jianhua Li, Xiuzhen Chen and **Wanyu Huang**. *ChinaCom 2014*.

Research Experience

Systems Approaches for studying interventions to improve physical health among SMI people *Nov. 2018 – Present*
We are working on systems models that can be used to estimate the effects of various interventions to improve physical health among people with serious mental illness on long-term public health outcomes.
Development of Expansion Planning Methods and Tools for Handling Uncertainty *Aug. 2017 – June 2018*
We are working to develop a new method for generating a small number of high quality scenarios which can help existing expansion planning models and tools to produce more resilient solutions. The effectiveness of the new method will be evaluated on real-world case studies using existing planning tools.
PIIR DDSI Big Data for Sustainable Cities Decision Making *Sep. 2016 – May 2018*
We developed an integreted agent-based model for modeling residents' decisions for adopting energy-saving practices. We also explored what factors matter when residents make these decisions.
Complex Network and Control Lab *Sep. 2015 – June 2016*
I worked on the undergraduate thesis project of Information Dissemination in Multilayer Social Networks.
Group Behaviors and Group Emotions in Social Networks *May 2014 – May 2016*
We proposed a multiple evidence fusion based information diffusion model which can simulate the propagation process based on users' historical and real-time behavior data, and a genetic-algorithm-based diffusing behavior model to investigate the effects of different factors in information propagation.