

**Yudi Chen**, Ph.D. Candidate  
4603 Nguyen Engineering Building  
4400 University Drive MS 6C1, Fairfax, Virginia 22030  
Phone: 513-641-8135  
Email: [ychen55@masonlive.gmu.edu](mailto:ychen55@masonlive.gmu.edu)  
Website: [www.yudi-chen.com](http://www.yudi-chen.com)

## RESEARCH INTERESTS

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- Decision support for enhancing infrastructure resilience
- Human behaviors in emergency environments for societal resilience
- Smart infrastructure digital twin through social and physical sensing
- Information integration through Bayesian inference and machine learning

## EDUCATION

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- PhD student, George Mason University, US, 2018 – 2021 (Expected)
  - Thesis: Enhanced Decision Support for Resilient Infrastructure Through Social Media Analytics
  - Supervisor: Wenying Ji
- Master of Mechanical Engineering, Beihang University, China, 2012 – 2015
  - Thesis: Damping modeling and analysis of vibration characteristics for shrouded blades
  - Supervisor: Yanrong Wang
- Bachelor of Mechanical Engineering, Beihang University, China, 2006 – 2010

## APPOINTMENT

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- Graduate Research Assistant, George Mason University, US, 2018 – Present
- XECA Turbo Technologies, China, 2017

## PUBLICATION

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### Journal Publication

1. **Yudi Chen** and Wenying Ji. (2021). Estimating public needs on critical infrastructure through Bayesian-based information integration. *International Journal of Disaster Risk Reduction*. (In preparation).
2. **Yudi Chen** and Wenying Ji. (2021). Public sentiment modeling for planning infrastructure restorations. *ASCE Journal of Computing in Civil Engineering*. (Under review, February 2021).
3. **Yudi Chen** and Wenying Ji. "Enhancing situational assessment of critical infrastructure in disasters using social media." *ASCE Journal of Management in Engineering*. [In revision, January 2021].

4. **Yudi Chen** and Wenying Ji. "Rapid damage assessment following natural disasters through information integration." *ASCE Natural Hazards Review*, [Under review, September 2020].
5. **Yudi Chen**, Yun Li, Zifu Wang, Alma Joanna Quintero, Chaowei Yang, and Wenying Ji. "Social media-based public opinion reasoning on society reopening amid COVID-19." *ASCE Natural Hazards Review*. [Under review, February 2020].
6. **Yudi Chen**, Qi Wang, and Wenying Ji. "Rapid Assessment of Disaster Impacts on Highways Using Social Media." *Journal of Management in Engineering*, 36(5), 04020068. (Editor's Choice, September 2020)

### Conference Publication

1. **Yudi Chen**, Angel Umana, Chaowei Yang, and Wenying Ji. "Condition sensing for electricity infrastructures through mining public topics from social media" The 18th annual conference on Information Systems for Crisis Response and Management (ISCRAM 2021). Blacksburg, VA, US.
2. **Yudi Chen**, Qi Wang, and Wenying Ji. "Assessing disaster impacts on highways using social media: Case study of Hurricane Harvey", ASCE Construction Research Congress 2020, AZ, US.
3. **Yudi Chen**, Qi Wang, and Wenying Ji. "A Bayesian-based approach for public sentiment modeling." Winter Simulation Conference 2019, MD, US.
4. Jing Liu, **Yudi Chen**, Duanshun Li, Noseong Park, Kisung Lee, and Dongwon Lee. "Predicting influence probabilities using graph convolutional networks." IEEE International Conference on Big Data 2019, CA, US.

### GRANTS

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- Decision Support System for Enhanced Infrastructure System Serviceability Following Natural Disasters: Social Media Mining Approach, 2019-2021, supported by Thomas F. and Kate Miller Jeffress Memorial Trust, \$120,000. Role: Major student contributor.
- Dissertation Completion Grant (\$10,000 + Tuition of 3 research credits), George Mason University, Spring 2021. Role: Principal Investigator.

### TEACHING RECORD

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- Guest lecture in CEIE 679 Construction Simulation, "Simulation-based optimization for construction scheduling", 2019 Spring.
- Guest lecture in CEIE 796 Data Analytics in Construction, "Machine learning algorithms for construction industry", 2018 Fall.

### MENTORSHIP

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- Angel Umana, Undergraduate, George Mason University, June 2019 – May 2020

## **PRESENTATION**

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- “Rapid assessment of disaster impacts on highways”, Construction Research Congress 2020, Tempe, AZ, US, Mar. 2020
- “A Bayesian-based approach for public sentiment modeling”, Winter Simulation Conference 2019, National Harbor, MD, US, Dec. 2019
- “Customized sentiment analysis for critical infrastructure in disasters”, CEI Member Appreciation Mixer, George Mason University, VA, US, Sep. 2019
- “Modeling public sentiment for indicating the urgency of infrastructure restorations”, CEI Luncheon, George Mason University, VA, US, Apr. 2019

## **SERVICE**

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### **Conference Reviewer**

- European Conference on Computing in Construction, 2021
- Annual Conference on Information Systems for Crisis Response and Management, 2021
- ASCE Construction Research Congress, 2020
- ASCE International Conference on Computing in Civil Engineering, 2019

## **AWARD**

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- Michael J. Casey Scholarship (\$1,000) , George Mason University, 2021
- NSF Travel Award (\$450), George Mason University, 2019
- Graduate National Award (\$5000), Ministry of Education in China, 2014