

# SHANGJIA DONG

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## PERSONAL INFORMATION

Dept. of Civil and Environmental Engineering, DuPont 344B  
Disaster Research Center, Graham 166B  
University of Delaware  
Newark, DE 19716

✉ [sjdong@udel.edu](mailto:sjdong@udel.edu)  
🎓 [Google Scholar](#)  
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## PROFESSIONAL EXPERIENCE

### University of Delaware

Assistant professor in *Civil and Environmental Engineering*  
Core Faculty in *Disaster Research Center (DRC)*  
Faculty Member in *Sociotechnical Systems Center (SSC)*

Newark, Delaware  
2020.8 – Present

### Texas A&M University

Postdoctoral Research Associate

College Station, Texas  
2018.9 – 2020.7

### Oregon State University

Graduate Research Assistant

Corvallis, Oregon  
2013.10 – 2018.9

## EDUCATION

### Oregon State University

*Ph.D. in Civil Engineering (Transportation)*  
*Minor in Computer Sciences*

Corvallis, Oregon  
2015.11 – 2018.9

- Dissertation: Percolation Modeling of Transportation Network Robustness Towards a Resilient Infrastructure System: From a Single Network to Interdependent Networks

*M.S. in Civil Engineering (Transportation)*

2013.10 – 2015.11

- Thesis: Stochastic Characterization of Highway Capacity and Its Applications

### University of Electronic Science and Technology of China

*B.S. in Information and Computational Science*  
*Dual B.S. in Finance*

Chengdu, Sichuan  
2009.9 – 2013.6

## REFEREED JOURNAL ARTICLES

- J1. **Dong, S.**, Gao, X., Mostafavi, A., and Gao, J., 2022, Modest flooding can trigger catastrophic road network collapse due to compound failure. (2022) *Communications Earth & Environment*, [doi.org/10.1038/s43247-022-00366-0](https://doi.org/10.1038/s43247-022-00366-0)
- J2. Esmalian, A. Yuan, F., Rajput, A., Farahmand, H., **Dong, S.**, Li, Q., Gao, X., Fan, C., Lee, C., Hsu, C., Patrascu, F., and Mostafavi, A., 2022. Operationalizing resilience practices in transportation infrastructure planning and project development. *Transportation Research Part D: Transport and Environment*, [doi.org/10.1016/j.trd.2022.103214](https://doi.org/10.1016/j.trd.2022.103214)
- J3. Farahmand, H., Liu, X., **Dong, S.**, Mostafavi, A., and Gao, J., 2022. A Network Observability Framework for Sensor Placement in Flood Control Networks to Improve Flood Situational Awareness and Risk Management. *Reliability Engineering System Safety*, 108366. [doi.org/10.1016/j.res.2022.108366](https://doi.org/10.1016/j.res.2022.108366)
- J4. **Dong, S.**, Yu, T., Farahmand, H., and Mostafavi, A. (2022). Predictive Multi-Watershed Flood Monitoring Using Deep Learning on Integrated Physical and Social Sensors Data. *Environment and Planning B: Urban Analytics and City Science*, [doi.org/10.1177/23998083211069140](https://doi.org/10.1177/23998083211069140)
- J5. **Dong, S.**, Malecha, M., Farahmand, H., Mostafavi, A., Berke, P.R. and Woodruff, S.C., 2021. Integrated infrastructure-plan analysis for resilience enhancement of post-hazards access to critical facilities. *Cities*, 117, p.103318. [doi.org/10.1016/j.cities.2021.103318](https://doi.org/10.1016/j.cities.2021.103318)

- J6. Farahmand, H., **Dong, S.** and Mostafavi, A., 2021. Network analysis and characterization of vulnerability in flood control infrastructure for system-level risk reduction. *Computers, Environment and Urban Systems*, 89, p.101663. [doi.org/10.1016/j.compenvurbsys.2021.101663](https://doi.org/10.1016/j.compenvurbsys.2021.101663)
- J7. Li, Z., Yu, H., Zhang, G., **Dong, S.** and Xu, C., 2021. Network-wide traffic signal control optimization using a multi-agent deep reinforcement learning. *Transportation Research Part C: Emerging Technologies*, 125, p.103059. [doi.org/10.1016/j.trc.2021.103059](https://doi.org/10.1016/j.trc.2021.103059)
- J8. Esmalian, A., **Dong, S.**, and Mostafavi, A., 2021. Susceptibility Curves for Humans: Empirical Survival Models for Determining Household-level Disturbances from Hazards-induced Infrastructure Service Disruptions. *Sustainable Cities and Society*. 102694. [doi.org/10.1016/j.scs.2020.102694](https://doi.org/10.1016/j.scs.2020.102694)
- J9. Esmalian, A., **Dong, S.**, Coleman, N. and Mostafavi, A., 2021. Determinants of risk disparity due to infrastructure service losses in disasters: a household service gap model. *Risk analysis*. [doi.org/10.1111/risa.13738](https://doi.org/10.1111/risa.13738)
- J10. **Dong, S.**, Yu, T., Farahmand, H. and Mostafavi, A., 2020. A Hybrid Deep Learning Model for Urban Flood Prediction and Situation Awareness using Channel Network Sensors Data. *Computer-Aided Civil and Infrastructure Engineering* [doi.org/10.1111/mice.12629](https://doi.org/10.1111/mice.12629)
- J11. **Dong, S.**, Yu, T., Farahmand, H., and Mostafavi, A., 2020. Probabilistic Modeling of Cascading Failure Risk in Interdependent Channel and Road Networks in Urban Flooding. *Sustainable Cities and Society* [doi.org/10.1016/j.scs.2020.102398](https://doi.org/10.1016/j.scs.2020.102398)
- J12. **Dong, S.**, Li, Q., Farahmand, H., Mostafavi, A., Berke, P. and Vedlitz, A., 2020. Institutional Connectedness in Resilience Planning and Management of Interdependent Infrastructure Systems. *ASCE Journal of Management in Engineering*. [doi.org/10.1061/\(ASCE\)ME.1943-5479.0000839](https://doi.org/10.1061/(ASCE)ME.1943-5479.0000839)
- J13. **Dong, S.**, Mostafavi, A., Wang, H., Gao, J. and Li, X., 2020. Measuring the topological robustness of transportation networks to disaster-induced failures: A percolation approach. *ASCE Journal of Infrastructure System*. [doi.org/10.1061/\(ASCE\)IS.1943-555X.0000533](https://doi.org/10.1061/(ASCE)IS.1943-555X.0000533)
- J14. **Dong, S.**, Wang, H., and Mostafavi, A. and Song, X., 2020. A network-of-networks percolation analysis of cascading failures in spatially co-located road-sewer infrastructure networks. *Physica A: Statistical Mechanics and Its Application*, p.122971. [doi.org/10.1016/j.physa.2019.122971](https://doi.org/10.1016/j.physa.2019.122971)
- J15. **Dong, S.**, Esmalian, A., Farahmand, H. and Mostafavi, A., 2020. An Integrated Physical-Social Analysis of Disrupted Access to Critical Facilities and Community Service-loss Tolerance in Urban Flooding. *Computers, Environment and Urban Systems*. 80, 101443. [doi.org/10.1016/j.compenvurbsys.2019.101443](https://doi.org/10.1016/j.compenvurbsys.2019.101443)
- J16. **Dong, S.**, Wang, H., Mostafavi, A. and Gao, J., 2019. Robust component: a robustness measure that incorporates access to critical facilities under disruptions. *Journal of the Royal Society Interface*, 16(157), p.20190149. [doi.org/10.1098/rsif.2019.0149](https://doi.org/10.1098/rsif.2019.0149)
- J17. **Dong, S.**, Yu, T., Farahmand, H. and Mostafavi, A., 2019. Bayesian Modeling of Flood Control Networks for Failure Cascade Characterization and Vulnerability Assessment. *Computer-Aided Civil and Infrastructure Engineering*. [doi.org/10.1111/mice.12527](https://doi.org/10.1111/mice.12527)
- J18. \*Farahmand, H., **Dong, S.**, Mostafavi, A., Berke, P., Woodruff, S., Hannibal, B. and Vedlitz, A., 2019. Institutional Congruence for Resilience Management in Interdependent Infrastructure Systems. *International Journal of Disaster Risk Reduction*. [doi.org/10.1016/j.ijdr.2020.101515](https://doi.org/10.1016/j.ijdr.2020.101515)
- J19. \*Li, Q., **Dong, S.** and Mostafavi, A., 2019. Modeling of Inter-organizational Coordination Dynamics in Resilience Planning of Infrastructure Systems: A Multilayer Network Simulation Framework. *Plos ONE*. [doi.org/10.1371/journal.pone.0224522](https://doi.org/10.1371/journal.pone.0224522)

- J20. \*Li, Q., **Dong, S.** and Mostafavi, A., 2019. A Meta-Network Framework for Analysis of Actor-Plan-Task-Infrastructure Networks in Resilience Planning and Management. *ASCE Natural Hazards Review* 21 (2). [doi.org/10.1061/\(ASCE\)NH.1527-6996.0000376](https://doi.org/10.1061/(ASCE)NH.1527-6996.0000376)
- J21. Mostafizi, A., Wang, H. and **Dong, S.**, 2019. Understanding the Multimodal Evacuation Behavior for a Near-Field Tsunami. *Transportation Research Record*, p.1-13. [doi.org/10.1177/0361198119837511](https://doi.org/10.1177/0361198119837511)
- J22. Mostafizi, A., Wang, H., Cox, D. and **Dong, S.**, 2019. An agent-based vertical evacuation model for a near-field tsunami: Choice behavior, logical shelter locations, and life safety. *International journal of disaster risk reduction*, 34, pp.467-479. [doi.org/10.1016/j.ijdr.2018.12.018](https://doi.org/10.1016/j.ijdr.2018.12.018)
- J23. **Dong, S.**, Mostafizi, A., Wang, H. and Li, J., 2018. A stochastic analysis of highway capacity: Empirical evidence and implications. *Journal of Intelligent Transportation Systems*, 22(4), pp.338-352. [doi.org/10.1080/15472450.2017.1396898](https://doi.org/10.1080/15472450.2017.1396898)
- J24. Mostafizi, A., **Dong, S.** and Wang, H., 2017. Percolation phenomenon in connected vehicle network through a multi-agent approach: Mobility benefits and market penetration. *Transportation Research Part C: Emerging Technologies*, 85, pp.312-333. [doi.org/10.1016/j.trc.2017.09.013](https://doi.org/10.1016/j.trc.2017.09.013)
- J25. Anderson, J.C. and **Dong, S.**, 2017. Heavy-vehicle driver injury severity analysis by time of week: a mixed logit approach using HSIS crash data. *Institute of Transportation Engineers. ITE Journal*, 87(9), p.41. [HSIS Highway Safety Data Best paper award](https://www.ite.org/HSIS-Highway-Safety-Data-Best-paper-award)
- J26. Mostafizi, A., Wang, H., Cox, D., Cramer, L.A. and **Dong, S.**, 2017. Agent-based tsunami evacuation modeling of unplanned network disruptions for evidence-driven resource allocation and retrofitting strategies. *Natural Hazards*, 88(3), pp.1347-1372. [doi.org/10.1007/s11069-017-2927-y](https://doi.org/10.1007/s11069-017-2927-y)
- J27. Wang, H., Liu, L., **Dong, S.**, Qian, Z. and Wei, H., 2016. A novel work zone short-term vehicle-type specific traffic speed prediction model through the hybrid EMD-ARIMA framework. *Transportmetrica B: Transport Dynamics*, 4(3), pp.159-186. [doi.org/10.1080/21680566.2015.1060582](https://doi.org/10.1080/21680566.2015.1060582)
- J28. **Dong, S.**, Wang, H., Hurwitz, D., Zhang, G. and Shi, J., 2015. Nonparametric modeling of vehicle-type-specific headway distribution in freeway work zones. *Journal of Transportation Engineering*, 141(11), p.05015004. [doi.org/10.1061/\(ASCE\)TE.1943-5436.0000788](https://doi.org/10.1061/(ASCE)TE.1943-5436.0000788)
- J29. Wang, H., Liu, L., Qian, Z., Wei, H. and **Dong, S.**, 2014. Empirical Mode Decomposition-Autoregressive Integrated Moving Average: Hybrid Short-Term Traffic Speed Prediction Model. *Transportation Research Record*, 2460(1), pp.66-76. [doi.org/10.3141/2460-08](https://doi.org/10.3141/2460-08)
- J30. Chen, L., Li, B., **Dong, S.** and Pan, H., 2013. A combined CFAHP-FTOPSIS approach for portfolio selection. *China Finance Review International*, 3(4), pp.381-395. ISSN: 2044-1398

REFERRED  
CONFERENCE  
PROCEEDINGS

\* represents research conducted under my supervision

- C1. \*Li, Q., **Dong, S.** and Mostafavi, A., 2019. Community Detection in Actor Collaboration Networks of Resilience Planning and Management in Interdependent Infrastructure Systems. *ASCE Construction Research Congress 2020*. Tempe, AZ. [doi.org/10.1061/9780784482858.073](https://doi.org/10.1061/9780784482858.073)
- C2. \*Farahmand, H., **Dong, S.** and Mostafavi, A., 2019. Vulnerability Assessment in Co-Located Flood Control and Transportation Networks. *ASCE Construction Research Congress 2020*. Tempe, AZ. [doi.org/10.1061/9780784482858.081](https://doi.org/10.1061/9780784482858.081)
- C3. \*Esmalian, A., **Dong, S.** and Mostafavi, A., 2019. Empirical Assessment of Household Susceptibility to Hazards-Induced Prolonged Power Outages *ASCE Construction Research Congress 2020*. Tempe, AZ. [doi.org/10.1061/9780784482858.100](https://doi.org/10.1061/9780784482858.100)

- C4. \*Li, Q., **Dong, S.** and Mostafavi, A., 2019. Modeling of Inter-Organizational Coordination Dynamics in Resilience Planning: A Multilayer Network Simulation Framework. *In Computing in Civil Engineering 2019: Smart Cities, Sustainability, and Resilience* (pp. 515-522). Reston, VA: American Society of Civil Engineers. [doi.org/10.1061/9780784482445.066](https://doi.org/10.1061/9780784482445.066)
- C5. **Dong, S.**, Mostafizi, A., Wang, H. and Bosa, P., 2016. Post-disaster Mobility in Disrupted Transportation Network: Case Study of Portland, Oregon. In Seventh China-Japan-US Trilateral Symposium on Lifeline Earthquake Engineering, Shanghai, China, ASCE. [doi.org/10.1061/9780784480342.068](https://doi.org/10.1061/9780784480342.068)
- C6. **Dong, S.**, Wang, H. and Li, J., 2015. Short-Term Forecasting of Highway Capacity through Wavelet Transform and Dynamic Neural Time Series: A Stochastic Analysis (No. 15-5048). *Transportation Research Board 94rd Annual Meeting*, Washington, DC.
- C7. Wang, H., Li, J., Yu, Y. and **Dong, S.**, 2014. Modeling and Analysis of Bottleneck Breakdown on Freeways with Multiple On-Ramps: a Copula Approach (No. 14-0987). *Transportation Research Board 93rd Annual Meeting*, Washington, DC.
- C8. **Dong, S.**, Wang, H., Hurwitz, D. and Heaslip, K., 2014. Vehicle-type Specific Headway Distribution in Freeway Work Zone: A Nonparametric Approach (No. 14-4355). *Transportation Research Board 93rd Annual Meeting*, Washington, DC.

TECHNICAL  
PROJECT  
REPORTS

- R1. **Dong, S.**, Farahmand, H., and Mostafavi, A.. 2019. Flood Control System - Before and After Harvey. *ASCE IRD - Post-Harvey Resilience Investigation Report*
- R2. Farahmand, H., Sherer, B., **Dong, S.**, and Mostafavi, A.. 2019. Residents and Infrastructure during Disaster Recovery: Priorities, and Attitude Implications for Resilient Planning and Management. *ASCE IRD - Post-Harvey Resilience Investigation Report*
- R3. **Dong, S.**, Mostafizi, A. and Wang, H. 2017. Understanding Interdependencies Between Systems Towards Resilient Critical Lifeline Infrastructure in the Pacific Northwest. *Pacific Northwest Transportation Consortium*.
- R4. McMullen, S. Wang, H., Ke, Y., Vogt, R. and **Dong, S.**, 2016. Road Usage Charge Economic Analysis. No. *FHWA-OR-RD-16-13*.

CONFERENCE  
PRESENTATION

- P1. An Integrative Framework to Measure the Impacts of Earthquake-induced Landslides on Transportation Network Mobility and Accessibility, *ASCE Lifelines Conference 2021-22*, (Virtual) Los Angeles, CA., 2022
- P2. Assessment and Modeling of Water Infrastructure Resilience, *ASCE Infrastructure Resilience Division (IRD) Research Forum: Enabling Resilient and Sustainable Communities*, Reston, VA., 2019
- P3. Assessing and Modeling of the Societal Impacts of Infrastructure Disruptions in Disasters, *ASCE Infrastructure Resilience Division (IRD) Research Forum: Enabling Resilient and Sustainable Communities*, Reston, VA., 2019
- P4. Understanding Interdependencies between Systems towards Resilient Critical Lifeline Infrastructures, 2016. *Engineering Mechanics Institute and Probabilistic Mechanics & Reliability Conference (EMI & PMC)*. Nashville, TN.
- P5. Post-Earthquake Mobility: Portland, *PacTrans Regional Transportation Conference Presentation Competition*. Seattle, WA. (2nd Place), 2015
- P6. Stochastic Modeling of Lifeline Infrastructure Interdependency: A Copula Approach, *2nd Annual Oregon State University College of Engineering Graduate Student Research Exposition*. Portland, OR., (1st Place), 2015
- P7. Short-term Forecasting of Highway Capacity through Wavelet Transform and Dynamic Neural Time Series: A Stochastic Analysis, *Transportation Research Board 94rd Annual Meeting*. Washington D.C., 2015

- P8. A Time-Series Analysis of Highway Capacity: Case Study of Georgia 400, *Traffic Flow Theory and Characteristic Committee Summer Symposium*. Portland, OR., 2014
- P9. Modeling and Analysis of Bottleneck Breakdown on Freeway with Multiple On-Ramps: a Copula Approach, *Transportation Research Board 93rd Annual Meeting*. Washington D.C., 2014
- P10. Vehicle-Type Specific Headway Distribution in Freeway Work Zones: A Nonparametric Approach, *Transportation Research Board 93rd Annual Meeting*. Washington D.C., 2014

INVITED TALKS

- T1. Risk and Resilience Modeling in the Human-Disaster-Built Environment Nexus, *University of Delaware, Department of Civil and Environmental Engineering, Disaster Research Center*, Newark DE. November 2019
- T2. Anatomy of Coupled Human-Infrastructure Systems Resilience to Urban Flooding: Integrated Assessment of Social, Institutional, and Physical Networks, *Urban Flooding Open Knowledge Network (UFOKN)*, Raleigh, NC. November 2019
- T3. An Integrated Physical-Social Analysis on Disrupted Access to Critical Facilities in Urban Flooding, *Oregon State University, School of Civil and Construction Engineering*, Corvallis OR. June 2019
- T4. Disrupted Access to Critical Facilities and Its Societal Impacts in Urban Flooding, *ASCE Infrastructure Resilience Division (IRD) 2019 Research Forum: Enabling Resilient and Sustainable Communities*, Reston, VA. May 2019
- T5. Towards a Smart and Resilient City of Connected Autonomous Vehicle and Interdependent Infrastructure Networks, *University of Hawaii at Manoa, Department of Civil and Environmental Engineering*, Honolulu HI. April 2019
- T6. Towards a Resilient and Sustainable Urban System: Percolation Modeling of Interdependent Infrastructure Networks, *Ohio State University, Department of Civil, Environmental, and Geodetic Engineering*, Columbus, OH. February 2019
- T7. Complex Infrastructure Network Modeling and Simulation, *Texas A&M University, Zachry Department of Civil and Environmental Engineering, CVEN 641*, College Station, TX. March 2019
- T8. Post-disaster Mobility in Disrupted Transportation Network: Case Study of Portland, Oregon. *Portland Metro*. Portland OR. June 2016
- T9. Network-Wide Impacts Of Connected Vehicles On Mobility: An Agent-Based Modeling Approach, *U.S. DOT T3e Webinar*, Online. August 2016

SELECTED RESEARCH PROJECTS

**[UDRF #21A00986](#) Integrated Household Vulnerability and Flood Risk Analysis for Equitable Transportation Access to Emergency Medical Services**

*Principle Investigator*

*2021.6 – Present*

**[NSF #1832662](#) CRISP 2.0 Type 2: Anatomy of Coupled Human-Infrastructure Systems Resilience to Urban Flooding: Integrated Assessment of Social, Institutional, & Physical Networks**

*Leading Postdoctoral Researcher*

*2018.9 – 2020.8*

**[NSF #1760258](#) RAPID: Assessment of Risks and Vulnerability in Coupled Human-Physical Networks of Houston's Flood Protection, Emergency Response, and Transportation Infrastructure in Harvey**

*Leading Postdoctoral Researcher*

*2018.9 – 2020.8*

**[NSF #1846069](#) CAREER: Household Network Modeling and Empathic Learning for Integrating Social Equality into Infrastructure Resilience Assessment**

Leading Postdoctoral Researcher 2019.2 – 2020.8

**NSF #1563618 An Integrated Social Science and Agent-based Modeling Approach to Improve Life Safety from Near-field Tsunami Hazards**

Resilience Modeler 2016.6 - 2018.9

TEACHING

**Instructor**

Fall 2020, 2021, CIEG641 Risk Analysis, University of Delaware  
Spring 2022, CIEG351 Transportation Engineering, University of Delaware  
Spring 2022, CIEG451 Transportation Engineering Laboratory, University of Delaware

**Guest Lecturer**

Spring 2019, CVEN 641 Construction Engineering Systems, Texas A&M University

**Teaching Assistant**

Spring 2014, CE491 Transportation Engineering, Oregon State University  
Winter 2014, CE392 Introduction to Highway Engineering, Oregon State University  
Fall 2013, ENGR 211 Statics, Oregon State University

ADVISING &  
MENTORING

**Committee Chair**

- Utkarsh Gangwal, Ph.D. student (UD) 2021.09 – Present  
*Research:* Resilient and Equitable Design of Human-Infrastructure Network

**Committee Member**

- Michael Palese, Ph.D. student (UD) 2021.05 – Present  
*Research:* Artificial Intelligence for Advanced Landslide Warning along Railroad Tracks
- Maryam Shaygan, Ph.D. Candidate (UD) 2020.10 – Present  
*Research:* Equilibrium Analysis in Mixed Traffic Environments
- Wanxin Li, Ph.D. Candidate (UD) 2020.10 – Present  
*Research:* Frontiers in Blockchain for Secure Information Sharing in Connected Vehicle Environments
- Di Yuan, Ph.D. Student (UD) 2020.10 – Present  
*Research:* Connected Autonomous Vehicles (CAVs)

**Research Adviser**

- Hamed Farahmand, Ph.D. Candidate (TAMU) 2018.9 – 2020.8  
*Research:* Resilience assessment of coupled flood control and roadway network
- Qingchun Li, Ph.D. Candidate (TAMU) 2018.9 – 2020.8  
*Research:* Network analysis of human system governing inter-dependent infrastructures
- Amir Esmalian, Ph.D. Candidate (TAMU) 2018.9 – 2020.8  
*Research:* Social impact of infrastructure service disruption
- Xinyu Gao, Ph.D. Student (TAMU) 2019.8 – 2020.8  
*Research:* Disaster impacted network mobility behavior
- Tianbo Yu, M.S. Student (TAMU) 2019.2 – 2020.8  
*Research:* Probabilistic graph modeling of flood control network
- Conner Lutz, Undergraduate Student (TAMU) 2019.5 – 2019.9  
*Research:* Infrastructure network and critical facility mapping

HONORS &  
AWARDS

- 1st Place, Highway Safety Information System Research Paper Competition 2017
- 1st Place, OSU College of Engineering Graduate Student Research Exposition 2015
- 2nd Place, PacTrans Student Conference Student Research Poster Competition 2015
- Richard and Lilo Smith Fellowship Award Recipient 2015

PROFESSIONAL  
SERVICES

**University of Delaware**

- Undergraduate Showcase Recruitment Committee, Department of Civil and Environmental Engineering (CEE), 2020.8 - Present
- Graduate Policy Committee, Department of Civil and Environmental Engineering (CEE), 2021.9 - Present
- Qualifier Committee, DISA program, Disaster Research Center (DRC), 2020.10 - Present
- Space Committee, Disaster Research Center (DRC), 2021.9 - Present
- Grand Challenge Scholars Program Mentor (GCSP), College of Engineering, 2021.9 - Present
- George W. Laird Fellowship Interview, Department of Civil and Environmental Engineering (CEE), 2021, 2022

**Grant Proposal Review**

- National Science Foundation (NSF) Reviewer and Panelist, 2020
- Transportation Consortium of South-Central States (Tran-SET) Reviewer, 2020

**Conference Committee**

- Area Editor, COTA International Symposium on Emerging Trends in Transportation (ISETT), 2019

**Journal Reviewer**

- Journal of the Royal Society Interface
- Transportation Research Part C: Emerging Technologies
- Transportation Research Part D: Transport and Environment
- Sustainable Cities and Society
- Current Opinion in Environmental Sustainability
- Sustainable and Resilient Infrastructure
- Natural Hazards Review
- Sustainability
- Journal of Transportation Engineering
- Journal of Modern Transportation
- Journal of Traffic and Transportation Engineering
- Journal of Management in Engineering
- Journal of Infrastructure Systems
- Transportation Research Record
- Scientific Reports
- Advances in Mechanical Engineering
- International Journal of Environmental Research and Public Health
- International Journal of Disaster Risk Reduction
- IEEE Transactions on Vehicular Technology
- IEEE Transactions on Intelligent Transportation Systems
- Journal of Ambient Intelligence & Humanized Computing
- Frontiers Built Environment
- Plos ONE

- [Journal of Emergency Management](#)

**Conference Reviewer**

- Complex Network (2018)
- Transportation Research Board (TRB) Annual Meeting (2014, 2015, 2016, 2017, 2018)
- Chinese Overseas Transportation Association (COTA) CICTP (2015, 2016, 2017)
- ASCE Construction Research Congress (CRC) (2020)
- International Symposium on Emerging Trends in Transportation (ISETT) (2019)