SHANGJIA DONG

PERSONAL INFORMATION

Dept. of Civil and Environmental Engineering, DuPont 344B ✉ sjdong@udel.edu
Disaster Research Center, Graham 166B 🎓 Google Scholar
University of Delaware 🖥 www.dongresearch.com
Newark, DE 19716

EMPLOYMENT

University of Delaware *Newark, Delaware*
Assistant professor in Civil and Environmental Engineering *2020.08 – Present*
Core Faculty in Disaster Research Center (DRC)
Faculty Member in Sociotechnical Systems Center (SSC)

Texas A&M University *College Station, Texas*
Postdoctoral Research Associate *2018.09 – 2020.07*

Oregon State University *Corvallis, Oregon*
Graduate Research Assistant *20013.10 – 2018.09*

EDUCATION

Oregon State University *Corvallis, Oregon*

Ph.D. in Civil Engineering (Transportation) *2015.11 – 2018.09*
Minor in Computer Sciences

- 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 *Chengdu, Sichuan*

B.S. in Information and Computational Science *2009.9 – 2013.6*
Dual B.S. in Finance

REFEREED JOURNAL ARTICLES

* represents my Ph.D. student

J1. Rajput, A., Nayak, S., **Dong, S.**, and Mostafavi, A., 2023. Anatomy of Perturbed Traffic Networks during Urban Flooding. *Sustainable Cities and Society*. 104693. doi.org/10.1016/j.scs.2023.104693

J2. Horney JA, Scales SE, Gangwal U, **Dong, S.**. 2023 Ensuring access to opioid treatment program services among Delawareans vulnerable to flooding. *Delaware Journal of Public Health. 9(2)*. doi.org/10.32481/djph.2023.06.024

J3. Yuan, F., Lee, C., Mobley, W., Farahmand, H., Blessing, R., **Dong, S.**, Mostafavi, A. and Brody., S. 2023. Predicting Road Flooding Risk with Machine Learning Approaches Using Crowdsourced Reports and Fine-grained Traffic Data. *Computational Urban Science*. doi.org/10.1007/s43762-023-00082-1

J4. **Dong, S.**, Gao, X., Mostafavi, A., Gao, J., and *Gangwal, U., 2023. Characterizing Resilience of Flood-disrupted Dynamic Transportation Network through

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the Lens of Link Reliability and Stability. *Reliability Engineering & System Safety*. doi.org/10.1016/j.ress.2022.109071

J5. *Gangwal, U., Siders, A., Horney, J., Michael, H., and **Dong, S.**, 2023. Critical Facility Accessibility and Road Criticality Assessment Considering Flood-induced Partial Failure. *Sustainable and Resilient Infrastructure*, doi.org/10.1080/23789689.2022.2149184

J6. Hsu, C., Lee, C., Rajput, A., Fan, C., Yuan, F., **Dong, S.**, Esmalian, A., Farahmand, H., Patrascu, F., Liu, C., Li, B., Ma, J., and Mostafavi, A., 2022. Quantitative measures for integrating resilience into transportation planning practice: Study in Texas. *Transportation Research Part D: Transport and Environment* https://doi.org/10.1016/j.trd.2022.103496

J7. *Gangwal, U., and **Dong, S.**, 2022. Critical facility accessibility rapid failure early-warning detection and redundancy mapping in urban flooding. *Reliability Engineering & System Safety*, 108555. doi.org/10.1016/j.ress.2022.108555

J8. **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

J9. Yuan, F., Fan, C., Farahmand, H., Coleman, N., Esmalian, A., Lee, C.C., Patrascu, F.I., Zhang, C., **Dong, S.**, and Mostafavi, A., 2022. Smart flood resilience: harnessing community -scale big data for predictive flood risk monitoring, rapid impact assessment, and situational awareness. *Environmental Research: Infrastructure and Sustainability 22(2)*, doi.org/10.1088/2634-4505/ac7251

J10. 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

J11. 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.ress.2022.108366

J12. **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

J13. **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

J14. 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.comp envurbsys.2021.101663

J15. Li, Z., Yu, H., Zhang, G., **Dong, S.** and Xu, C., 2021. Network-wide traffic signal contr- ol optimization using a multi-agent deep reinforcement learning.

Transportation Research Part C: Emerging Technologies, 125, p.103059. doi.or g/10.1016/j.trc.2021.103059

J16. Esmalian, A., **Dong, S.**, and Mostafavi, A., 2021. Susceptibility Curves for Humans: Empirical Survival Models for Determining Household-level Disturbances from Haz- ards-induced Infrastructure Service Disruptions. *Sustainable Cities and Society*. 1026-94. doi.org/10.1016/j.scs.2020.102694

J17. 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

J18. **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

J19. **Dong, S.**, Yu, T., Farahmand, H., and Mostafizi, 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

J20. **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

J21. **Dong, S.**, Mostafizi, 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

J22. **Dong, S.**, Wang, H., and Mostafizi, 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

J23. **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

J24. **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

J25. **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

J26. 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/10.1 016/j.ijdrr.2020.101515

J27. 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

J28. 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

J29. 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

J30. 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/10.1 016/j.ijdrr.2018.12.018

J31. **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

J32. 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

J33. 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**

J34. 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

J35. 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/10.10 80/21680566.2015.1060582

J36. **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

J37. 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

REFERRED CONFERENCE PROCEEDINGS

C1. Liu, J., **Dong, S.**, Morris, T., and Fang Y., 2022. Social Equality-Aware Resource Allocation for Post-Disaster Communication Restoration. *2023 32nd International Conference on Computer Communications and Networks (ICCCN).* Honolulu, HI, USA 10.1109/ICCCN58024.2023.10230184

C2. **Dong, S.**, Wang, H., Olsen, M. J., Barbosa, A. R., and Bunn, M. D., 2022. An Integrative Framework to Measure the Impacts of Earthquake-Induced Landslides on Transportation Network Mobility and Accessibility. *ASCE Lifelines 2022: 1971 San Fernando Earthquake and Lifeline Infrastructure (pp. 133-142).* University of California Los Angeles, CA. doi.org/10.1061/97807844 84432.013

C3. Esmalian, A., **Dong, S.** and Mostafavi, A., 2022. Survival Functions of the Shelter-in-Place Households for Disruptions in Infrastructure Services. *ASCE Lifelines 2022: Advancing Lifeline Engineering for Community Resilience (pp. 423-433).* University of California Los Angeles, CA. doi.org/10.1061/97807844 84449.037

C4. Esparza, M., Esmalian, A., **Dong, S.** and Mostafavi, A., 2021. Examining Spatial Clusters for Identifying Risk Hotspots of Communities Susceptible to Flood-Induced Transportation Disruptions. *ASCE International Conference on Computing in Civil Engineering 2021.* Orlando, FL. doi.org/10.1061/9780784483893. 060

C5. 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/10.106 1/9780784482858.073

C6. 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

C7. 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/10.1061/97807844 82858.100

C8. 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/10.1061/97807 84482445.066

C9. **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

TECHNICAL PROJECT REPORTS

R1. Lee, Cheng-Chun; Mostafavi, A., ñas-Osorio, L., Sutley, E., Lester, H., Norton, T., Wang, H., **Dong, S.**, Sichani, M., Farahmand, H., Jimenez, E., Esmalian, A., Coleman, N., Dargin, J. and Zhou, X. 2022 *Hurricane Harvey Infrastructure 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. Wang, Y., Henrickson, K., **Dong, S.**, Ash, J., Yang, H., Li, Z., and Chen, C. 2018. Freeway Traffic Safety and Efficiency Enhancement Through Adaptive Roadway Lighting and Control Enabled by Connected Sensor and Infrastructure Networks. *Pacific Northwest Transportation Consortium.*

R4. **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.*

R5. McMullen, S. Wang, H., Ke, Y., Vogt, R. and **Dong, S.**, 2016. Road Usage Charge Economic Analysis. *No. FHWA-OR-RD-16-13.*

CONFERENCE PRESENTATIONS

P1. TRBAM-23-02463: Integrating Quantitative Resilience Measures into Transportation Planning Practices: Study in Texas, *Transportation Research Board 2023 Annual Meeting.* Washington D.C., 2023

P2. 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

P3. TRBAM-22-03474: Operationalizing Resilience Practices in Transportation Infrastructure Planning and Project Development, *Transportation Research Board 2022 Annual Meeting.* Washington D.C., 2022

P4. SimCenter Symposium, Texas Advanced Computing Center (TACC). Austin, TX, 2022

P5. Assessment and Modeling of Water Infrastructure Resilience, *ASCE Infrastructure Resilience Division (IRD) Research Forum: Enabling Resilient and Sustainable Communities,* Reston, VA., 2019

P6. 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

P7. Understanding Interdependencies between Systems towards Resilient Critical Lifeline Infrastructures, 2016. *Engineering Mechanics Institute and Probabilistic Mechanics & Reliability Conference (EMI & PMC).* Nashville, TN.

P8. Post-Earthquake Mobility: Portland, *PacTrans Regional Transportation Conference Presentation Competition.* Seattle, WA. (2nd Place), 2015

P9. 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

P10. 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

P11. A Time-Series Analysis of Highway Capacity: Case Study of Georgia 400, *Traffic Flow Theory and Characteristic Committee Summer Symposium.* Portland, OR., 2014

P12. 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

P13. Vehicle-Type Specific Headway Distribution in Freeway Work Zones: A Non-parametric Approach, *Transportation Research Board 93rd Annual Meeting*. Washington D.C., 2014

INVITED TALKS

T1. Disaster-resilient healthcare: Improving critical facility access equity in changing climate, *COTA International Conference of Transportation Professionals (CICTP 2023)* Beijing University of Technology (BJUT), Beijing, China. July 2023

T2. Risk and Resilience Modeling in the Human-Disaster-Built Environment Nexus, *COTA International Conference of Transportation Professionals (CICTP 2023)* Beijing University of Technology (BJUT), Beijing, China. July 2023

T3. Improving Critical Facility Accessibility and Equity During Flooding, *International Research Symposium: Resilient City and Digital Transportation. Yangzhou University*, Yangzhou, China. July 2023

T4. Improving Critical Facility Accessibility and Equity in Coastal Communities, *Oregon State University Keiweit Center for Infrastructure and Transportation Research Seminar*, Corvallis, OR. April 2023

T5. Beyond Floodplain: Flood-disrupted Access to Critical Facilities, *Field Seminar, Delaware Floodplain: Impacts of Sea Level Rise, Severe Storms, and Hurricanes in a Low-Lying State*, Lewes DE. July 2022

T6. An Introduction of Network Science in Engineering Research, *NSF REU in Sustainable Resilient Transportation Systems Seminar*, Newark DE. June 2022

T7. Flood-disrupted Transportation Network and Community Well-being, *Delaware Coastal Flooding Workshop*, Newark DE. May 2022

T8. 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

T9. 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

T10. 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

T11. 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

T12. 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

T13. 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

T14. Complex Infrastructure Network Modeling and Simulation, *Texas A&M University, Zachry Department of Civil and Environmental Engineering, CVEN 641*, College Station, TX. March 2019

T15. Post-disaster Mobility in Disrupted Transportation Network: Case Study of Portland, Oregon. *Portland Metro*. Portland OR. June 2016

T16. Network-Wide Impacts Of Connected Vehicles On Mobility: An Agent-Based Modeling Approach, *U.S. DOT T3e Webinar*, Online. August 2016

TEACHING **Instructor (UD)**

Semester	Course	Credits	Students	Title
S 2023	CIEG351	3	62	(UG) Transportation Engineering
F 2022	CIEG641	3	18	(G) Risk Analysis
S 2022	CIEG351	3	57	(UG) Transportation Engineering
S 2022	CIEG451	1	47	(UG) Transportation Engineering Lab
F 2021	CIEG641	3	17	(G) Risk Analysis
F 2020	CIEG641	3	28	(G) Risk Analysis

* G: Graduate-level, UG: Undergraduate-level

ADVISING & MENTORING **Committee Chair**

- Utkarsh Gangwal, Ph.D. student (UD)   *2021.09 – Present*
  Topic: Resilient and Equitable Design of Human-Infrastructure Network
- Saurabh Mohite, Ph.D. student (UD)   *2023.09 – Present*
  Topic: TBD
- Xiao Qian, Ph.D. student (UD)   *2023.09 – Present*
  Topic: TBD

Committee Member

- Farah Nibbs, Ph.D. Candidate (UD)   *2022.09 – Present*
  Topic: Developing an Adaptive Framework to Manage Natural
  Hazard Risk to Road Infrastructure using a DAPP-Light Model:
  a Case Study of Caribbean SIDS
- Kenza Soufiane, Ph.D. Candidate (UD)   *2022.08 – 2023.11*
  Topic: The Dynamic Interactions of Adjacent Crossties
  Degradation Rates: A Theory Guided Machine Learning Framework
- Michael Palese, Ph.D. (UD)   *2021.05 – 2023.06*
  Topic: Artificial Intelligence for Advanced Landslide Warning
  along Railroad Tracks
- Caroline Williams, Ph.D. (UD)   *2022.01 – 2023.06*
  Topic: Regional Hurricane Risk Modelling: Incorporating
  a Dynamic Building Inventory Model

- Sina Naeimi Dafchahi, Ph.D. (UD) *2022.01 – 2023.06*
  Topic: Modeling the Functionality of Water Distribution
  Network System.
- Maryam Shaygan, Ph.D. Candidate (UD) *2020.10 – 2023.08*
  Topic: Equilibrium Analysis in Mixed Traffic Environments
- Di Yuan, Ph.D. (UD) *2020.10 – 2022.12*
  Topic: Connected & Autonomous Vehicles (CAVs)
- Osman Mohamed, M.S. (UD) *2022.10 – 2023.07*
  Topic: Development of a Multi-Dimensional Time-Based
  Track Safety and Quality Index (TSQI) and Defect Risk Model
  in Support of Autonomous Track Geometry Inspection
- Mohammed Ahmed, M.S. (UD) *2022.10 – 2023.07*
  Topic: Predicting track geometry using machine-learning methods
- Ajay Baniya, Ph.D. Candidate (UD) *2023.01 – 2023.04*
  Topic: Durability Assessment of Externally Bonded Carbon
  Fiber-Reinforced Polymer (CFRP) Composite Repairs
- Nafiseh Soleimani, Ph.D. (UD) *2020.10 – 2022.06*
  Topic: Earthquake Risk to Civil Infrastructure System
  Currently a risk modeler at Risk Management Solution
- Wanxin Li, Ph.D. (UD) *2020.10 – 2022.04*
  Topic: Frontiers in Blockchain for Secure Information
  Sharing in Connected Vehicle Environments
  Currently a lecture at Xi'an Jiaotong-Liverpool University

Research Adviser

- Aiden Pape, Undergrad Researcher (Middlebury College) *2023.06 – 2023.09*
  Research: Generating Geolocated Synthetic Population
  to Assess Travel Need to Access Opioid Treatment Centers
- Jack Kingham, Undergrad Researcher (UD) *2022.04 – 2023.09*
  Research: Predicting Travel Patterns to Delaware Healthcare
  Facilities During Flooding
- Annabelle Dorsett, Undergrad Researcher (UD) *2022.04 – 2022/12*
  Research: Infrastructure service usage behavior analysis
- Jiaji Ma, Undergrad Researcher (UVA) *2022.06 – 2023/06*
  Research: Examine road access to fire station during flooding

HONORS &
AWARDS
- Travel Award, NHERI Computational Modeling and Simulation 2022
  Center (SimCenter) Symposium
- 1st Place, Highway Safety Information System Research Paper 2017
  Competition
- 1st Place, OSU College of Engineering Graduate Student 2015
  Research Exposition
- 2nd Place, PacTrans Student Conference Student Research 2015
  Poster Competition
- Richard and Lilo Smith Fellowship Award Recipient 2015

Service to the College

Grand Challenge Scholar Program Mentor   *2021-2023*

Service to the Department

Graduate Policy Committee   *2021-2023*
George W. Laird Fellowship Review Committee   *2021-2022*
Undergraduate Showcase Recruitment Committee   *2020-2021*

Service to the Disaster Research Center

Disaster Science and Management Ph.D Qualifying Exam Committee *2021-2023*
Space Committee   *2022-2023*

Service to the Profession

Area Editor, COTA International Conference of Transportation Professionals *2023*
(CICTP): Transportation System Risk and Resilience Analysis
National Science Foundation Proposal Reviewer   *2021-2022*
Transportation Consortium of South-Central States   *2021*
(Tran-SET) Proposal Reviewer

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

IN THE NEWS
- University of Delaware Disaster Research Center gets $16.5 million to study equity in disaster recovery. WHYY News September 25, 2022 ([Link](#))
- Costal Community Resilience: UD's Disaster Research Center awarded $16.5 million to study interplay between resilience, equity and economic prosperity. UDaily September 20, 2022 ([Link](#))
- Data Boost to Battle Floods: UD team partners with national research group dedicated to addressing America's flood risk. UDaily June 03, 2020 ([Link](#))