Fred Feng

University of Michigan-Dearborn
Industrial and Manufacturing Systems Engineering
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Research website: https://fenggroup.org
Research GitHub: https://github.com/fenggroup

Research areas

- Advancing safe, sustainable, and just systems for cities and communities through data-driven insights
- To this end, we use a variety of research methods including data analytics, applied statistics, causal inference, machine learning, human factors, and computational modeling and simulation.

Employment

- University of Michigan-Dearborn, Industrial and Manufacturing Systems Engineering
  - Associate Professor, 2024-present
  - Assistant Professor, 2018-2024
- University of Michigan Transportation Research Institute (UMTRI)
  - Postdoctoral Fellow, 2015-2018, Advisor: Shan Bao

Education

- Ph.D., Industrial and Operations Engineering, University of Michigan, Ann Arbor, 2015
  - Dissertation: "Queuing network modeling of human multitask performance and its application to usability testing of in-vehicle infotainment systems", Advisor: Yili Liu
- M.S., Mechanical Engineering, Tsinghua University, China, 2009
  - Thesis: "Driver drowsiness detection based on multi-sensor data fusion", Advisor: Bo Cheng
- B.E., Automotive Engineering, Tsinghua University, China, 2006

Grants

External grants

1. "CAREER: Improving bicycling safety by developing a research framework for studying driver-bicyclist interactions" National Science Foundation (NSF) Faculty Early Career Development (CAREER) Award ($549,037), 5 years (2022-2027), PI: Fred Feng
2. "A data-driven approach on examining vulnerable road user safety: from real-world corner cases to virtual simulation" Sponsor: Toyota Collaborative Safety Research Center, 18 months(2022-2023), PI: Shan Bao, Co-PI: Fred Feng
3. "Online driver model development to support shift schedule optimization and powertrain system improvements" Sponsor: Ford Motor Company, 2 years (2021-2023), PI: Fred Feng
4. "Research on the trending of micromobility: patterns and issues" Sponsor: Mcity tailored project from Honda Motor Company, 9 months (2021-2022), PI: Shan Bao, Co-PI: Fred Feng
5. "A continued naturalistic bicycling study in Ann Arbor and bicycle corner case simulation in CARLA" Sponsor: Toyota Research Institute, 2 years (2019-2020), PI: Fred Feng
6. "Developing bicycle-related corner case scenarios and a bicyclist model for testing self-driving cars using naturalistic driving data and crash data" Sponsor: Toyota Research Institute, 7 months (2018-2019), Subaward, PI: Fred Feng
7. "A naturalistic bicycling study in the Ann Arbor area" Sponsor: Toyota Research Institute, 4 months (2018), Subaward, PI: Fred Feng

Internal grants

1. "Developing an open-source and scalable platform for analyzing and publishing bike traffic data: a community-engaged approach to sustainable transportation planning and benchmarking" Research Initiation & Development Grant ($24,984), 2022-2023, PI: Fred Feng
2. "The e-bike boom: Examining key safety factors on e-bike potential to promote sustainability and equity in Detroit" UM-Dearborn–UM-Flint Collaborative Research Grants, ($39,970), 2022-2023, Co-PI: Fred Feng
3. "Measuring bicycle traffic volume using pneumatic bicycle counter" Summer Undergraduate Research Experience (SURE) Program ($3,200), 2022, PI: Fred Feng (The student mentee Christopher Salisbury won the 2nd place poster award.)
4. "Collection and analysis of traffic data to examine the effectiveness of the Dearborn Healthy Streets program" Office of Metropolitan Impact (OMI) Community-Based Research Seed Grants ($8,180), 2021, PI: Fred Feng
5. "Center for Community Health and Equity Research" Research Planning Grants for Catalyzing Faculty Research Innovation and Collaboration ($9,968), 2020, Co-PI: Fred Feng
6. "A Browser-based Tool for Interactive Visualizations of Probability Distributions" Open Educational Resources (OER) Supplemental Materials Grant ($500), 2020, PI: Fred Feng

Publications

Journal articles

Zhang, Chengxin, Huizhong Guo, Zifei Wang, Fred Feng, Anuj Pradhan, and Shan Bao. 2025. "Assessing the Effectiveness of Driver Training Interventions in Improving Safe Engagement with Vehicle Automation Systems." *Journal of Safety Research* 95: 197–210. https://doi.org/10.1016/j.jsr.2025.10.003.

Ammar, Dania, Aditi Misra, Fred Feng, and Shan Bao. 2023. "Identifying Factors Related to Crash Injury Levels Involving Bicyclists at Different Locations Through Crash Data Analysis." *Transportation Research Record*, ahead of print. https://doi.org/10.1177/03611981221148486.

Avetisyan, Lilit, Chengxin Zhang, Sue Bai, et al. 2022. "Design a Sustainable Micro-Mobility Future: Trends and Challenges in the US and EU." *Journal of Engineering Design* 33 (8-9): 587–606. https://doi.org/10.1080/09544828.2022.2142904.

Sun, Wenbo, Matthew Aguirre, Jionghua Judy Jin, et al. 2021. "Online Distraction Detection for Naturalistic Driving Dataset Using Kinematic Motion Models and a Multiple Model Algorithm." *Transportation Research Part C: Emerging Technologies* 130 (103317). https://doi.org/10.1016/j.trc.2021.103317.

Yu, Bo, Shan Bao, Fred Feng, and James Sayer. 2019. "Examination and Prediction of Drivers' Reaction When Provided with V2I Communication-Based Intersection Maneuver Strategies." *Transportation Research Part C: Emerging Technologies* 106: 17–28. https://doi.org/10.1016/j.trc.2019.07.007.

Feng, Fred, Shan Bao, Robert C Hampshire, and Michael Delp. 2018. "Drivers Overtaking Bicyclists-an Examination Using Naturalistic Driving Data." *Accident Analysis & Prevention* 115: 98–109. https://doi.org/10.1016/j.aap.2018.03.010.

Feng, Fred, Shan Bao, Judy Jin, et al. 2018. "Estimation of Lead Vehicle Kinematics Using Camera-Based Data for Driver Distraction Detection." *International Journal of Automotive Engineering* 9 (3): 158–64. https://doi.org/10.20485/jsaeijae.9.3_158.

Feng, Fred, Yili Liu, and Yifan Chen. 2018. "Effects of Quantity and Size of Buttons of in-Vehicle Touch Screen on Drivers' Eye Glance Behavior." *International Journal of Human–Computer Interaction* 34 (12): 1105–18. https://doi.org/10.1080/10447318.2017.1415688.

Feng, Fred, Shan Bao, James R Sayer, Carol Flannagan, Michael Manser, and Robert Wunderlich. 2017. "Can Vehicle Longitudinal Jerk Be Used to Identify Aggressive Drivers? An Examination Using Naturalistic Driving Data." *Accident Analysis & Prevention* 104: 125–36. https://doi.org/10.1016/j.aap.2017.04.012.

Feng, Fred, Yili Liu, and Yifan Chen. 2017. "A Computer-Aided Usability Testing Tool for in-Vehicle Infotainment Systems." *Computers & Industrial Engineering* 109: 313–24. https://doi.org/10.1016/j.cie.2017.05.019.

Cheng, Bo, Wei Zhang, Yingzi Lin, Ruijia Feng, and Xibo Zhang. 2012. "Driver Drowsiness Detection Based on Multisource Information." *Human Factors and Ergonomics in Manufacturing & Service Industries* 22 (5): 450–67. https://doi.org/10.1002/hfm.20395.

Conference proceedings

Moustafa, Rayane, Gandhimathi Padmanaban, and Fred Feng. 2026. "Quantifying Drivers Overtaking Bicyclists with Surrogate Safety Measures Derived from High-Resolution Digital Lidar." *Transportation Research Board 105th Annual Meeting.*

Padmanaban, Gandhimathi, Rayane Moustafa, and Fred Feng. 2026. "A Geometry-Informed Computer Vision Method for Detecting and Examining Overtaking Vehicles from a Bicycle." *Transportation Research Board 105th Annual Meeting.*

Padmanaban, Gandhimathi, Fred Feng, Edward Dai, Ankit Saini, Guopeng Hu, and Yanan Zhao. 2025. "A Comparative Analysis of Acceleration and Deceleration Profiles for Aggressive Driving Styles and Fuel Economy Test Cycles." *SAE Technical Paper.*

Deshmukh, Aditya, Zifei Wang, Huizhong Guo, et al. 2023. "A Systematic Review of Challenging Scenarios Involving Automated Vehicles and Vulnerable Road Users." *Human Factors and Ergonomics Society Annual Meeting.*

Feng, Fred. 2023. "Development of a Research Bicycle with High-Resolution Lidar Sensor for Studying Driver-Cyclist Interactions." *International Cycling Safety Conference* (The Hague, the Netherlands).

Munnamgi, H. Vasanth, and Fred Feng. 2022. "An Automatic Method to Extract Events of Drivers Overtaking Cyclists from Trajectory Data Captured by Drones." *International Cycling Safety Conference* (Dresden, Germany).

Feng, Fred, and Ayah Hamad. 2021. "Development of a High Fidelity Virtual Reality Cycling Simulator for Road Safety Education and Research." *Transportation Research Board 100th Annual Meeting.*

Feng, Fred, Shan Bao, Colleen Hillard, Mark Gilbert, and Jacopo Serafin. 2020. "A Naturalistic Cycling Study in Ann Arbor." *Transportation Research Board 99th Annual Meeting.*

Bao, Shan, Fred Feng, Anuj Pradhan, Yu Zhang, Bochen Jia, and John Sullivan. 2019. "Examination of the Effectiveness of Multiple Training Methods on Supporting Drivers' Better Understanding Towards Level 2 Automated Vehicle Systems." *Transportation Research Board 98th Annual Meeting.*

Yu, Bo, Shan Bao, Fred Feng, and James Sayer. 2019. "Drivers' Reaction Analysis and Prediction with V2I-Communication-Based Energy-Related Strategies." *Transportation Research Board 98th Annual Meeting.*

Feng, Fred, Shan Bao, and Michael Delp. 2018. "Vehicle Lane Encroachment When Drivers Overtaking Bicyclists-an Examination Using Naturalistic Driving Data." *Transportation Research Board 97th Annual Meeting.*

Jeong, Heejin, Fred Feng, and Yili Liu. 2017. "Computational Modeling of Driver Lateral Control on Curved Roads with Integration of Vehicle Dynamics and Reference Trajectory Tracking." *9th International Driving Symposium on Human Factors in Driver Assessment, Training and Vehicle Design.* https://doi.org/10.17077/drivingassessment.1635.

Chen, Yifan, Basavaraj Tonshal, James Rankin, and Fred Feng. 2016. "Development of an Integrated Simulation System for Design of Speech-Centric Multimodal Human-Machine Interfaces in an Automotive Cockpit Environment." *ASME 2016 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference*. https://doi.org/10.1115/DETC2016-59309.

Feng, Fred, Shan Bao, James Sayer, and David LeBlanc. 2016. "Spectral Power Analysis of Drivers' Gas Pedal Control During Steady-State Car-Following on Freeways." *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* 60: 729–33. https://doi.org/10.1177/1541931213601167.

Feng, Fred, Yili Liu, Yifan Chen, Dimitar Filev, and Curtis To. 2014. "Computer-Aided Usability Evaluation of in-Vehicle Infotainment Systems." *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* 58: 2285–89. https://doi.org/10.1177/1541931214581476.

Feng, Fred, and Yili Liu. 2013. "Computational Modeling of Feature and Conjunction Visual Search Tasks Using Queuing Network-Model Human Processor (QN-MHP)." *2nd International Digital Human Modeling Symposium Proceedings*.

Feng, Ruijia, Guangyuan Zhang, and Bo Cheng. 2009. "An on-Board System for Detecting Driver Drowsiness Based on Multi-Sensor Data Fusion Using Dempster-Shafer Theory." *2009 International Conference on Networking, Sensing and Control*, 897–902. https://doi.org/10.1109/ICNSC.2009.4919399.

Lin, Qingfeng, Ruijia Feng, Bo Cheng, Junke Lai, Hong Zhang, and Bingsong Mei. 2008. "Analysis of Causes of Rear-End Conflicts Using Naturalistic Driving Data Collected by Video Drive Recorders." *SAE Technical Paper*. https://doi.org/10.4271/2008-01-0522.

Zhang, Guangyuan, Bo Cheng, Ruijia Feng, and Jiawen Li. 2008. "Real-Time Driver Eye Detection Method Using Support Vector Machine with Hu Invariant Moments." *2008 International Conference on Machine Learning and Cybernetics* 5: 2999–3004. https://doi.org/10.1109/ICMLC.2008.4620921.

Zhang, Guangyuan, Bo Cheng, Ruijia Feng, and Xibo Zhang. 2008. "A Real-Time Adaptive Learning Method for Driver Eye Detection." *2008 Digital Image Computing: Techniques and Applications*, 300–304. https://doi.org/10.1109/DICTA.2008.43.

Book chapters

Owens, Justin M, Laura Sandt, Azra Habibovic, et al. 2019. "Automated Vehicles and Vulnerable Road Users: Envisioning a Healthy, Safe and Equitable Future." *Automated Vehicles Symposium 6*, 61–71. https://doi.org/10.1007/978-3-030-22933-7.

Pradhan, Anuj K, John Sullivan, Chris Schwarz, Fred Feng, and Shan Bao. 2018. "Training and Education: Human Factors Considerations for Automated Driving Systems." *Road Vehicle Automation 5*, 77–84. https://doi.org/10.1007/978-3-319-94896-6.

Technical reports

Feng, Ruijia, Basavaraj Tonshal, James Rankin, and Yifan Chen. 2013. "Speech Centric Multi-Contour Seat Multimodal Interaction Study." *Ford Research and Advanced Engineering Technical Report.*

Chen, Yifan, Ruijia Feng, Basavaraj Tonshal, et al. 2012. "A Survey of the Emotive Driver Advisory System (EDAS) Help Function Concept." *Ford Research and Advanced Engineering Technical Report.*

Granted patents

Tahmasbi-Sarvestani, Amin, Shan Bao, Fred Feng, Judy Jin, and Wenbo Sun. 2023. Systems and methods for distracted driving detection. Patent US11565693B2, issued 2023.

Delp, Michael, Ruijia Feng, and Shan Bao. 2020. System, method, and computer-readable medium for autonomous vehicle response to bicycles at intersections. Patent US10788834B2, issued 2020.

Open-source software

1. Interactive visualization of probability distributions (Website, GitHub repo)
2. Web-based interactive dashboards for bicycle counter data
    - Dashboard based on Python & Plotly (Website, GitHub repo)
    - Dashboard based on JavaScript & D3.js (GitHub repo)
3. Web-based point cloud visualization for active transportation (Website, GitHub repo)

Presentations

1. "Who Injured Whom-Counterparties in Road Traffic Crashes, Vehicle Bloat, and Crash Regardfulness", Next Generation Transportation Systems Seminar Series, University of Michigan, Ann Arbor, Civil and Environmental Engineering, March 2025
2. "Cycling safety: From crash data analysis to a naturalistic cycling study", Center for Connected and Automated Transportation (CCAT) Research Review, October 2021 (recording)
3. "A Naturalistic Cycling Study in Ann Arbor, Michigan", Tran-SET Webinar Series, September 2021 (recording)
4. "Sorry Mate I Didn't See You-Driver distraction and in-vehicle infotainment touch screen user interface design", General Motors Human Factors/User Experience Seminar, June 2020
5. "Bicycling safety in the future of mobility", Next Generation Transportation Systems Seminar Series, University of Michigan, Ann Arbor, Civil and Environmental Engineering, September 2019
6. "Bicycling safety and human-powered mobility in the era of automated driving." New Faculty Research Seminar Series, University of Michigan-Dearborn, November 2018

7. Automated Vehicle Symposium Breakout Session: "AVs & Vulnerable road users: Envisioning a healthy, safe, and equitable future", July 2018
8. Michigan Bicycle Conference: Bicycle Data and Research Workshop, June 2018
9. Transportation Research Board Annual Meeting Workshop: "When AV and people meet - planning for the pedestrian/bike/autonomous vehicle interaction", January 2018
10. Michigan Institute for Data Science (MIDAS) Mobile Sensor Meeting, November 2017
11. "Here's the data, now what? Using large-scale naturalistic driving data to study driver behaviors and develop advance safety technologies" Next Generation Transportation Systems Seminar Series, University of Michigan, Ann Arbor, Civil and Environmental Engineering, April 2017

Press

1. Ann Arbor bikeway clocks record-high 10,000-plus trips in July, MLive, August 2023
2. "Ann Arbor's new bikeways used by many, help grow bike ridership", MLive, March 2023
3. "Moving beyond Gold-Level: Ann Arbor cyclists want better biking infrastructure", The Michigan Daily, March 2022
4. "UM-Dearborn's Fred Feng lands NSF CAREER Award to advance bicycle safety research", University of Michigan-Dearborn, March 2022
5. "Improving bicycling safety by developing a research framework for studying driver-bicyclist interactions", Michigan Institute for Data Science (MIDAS), February 2022
6. "Where virtual reality is taking us next", University of Michigan-Dearborn, January 2022
7. "Bike safety research is going 'high-res' with this new technology", University of Michigan-Dearborn, July 2021
8. "Making it safer to bike alongside autonomous cars", University of Michigan Business Engagement Center, May 2020
9. "Painted white lines are not cyclist-protecting forcefields, agree experts", Forbes, April 2019
10. "Unlucky for bicyclists, every 13th passing motorist is looking elsewhere", Forbes, October 2018

Teaching

Courses

- **IMSE 317 Engineering Probability and Statistics**, W19, F20, W21, F21, W22, F25, W26
  - Undergraduate course, University of Michigan-Dearborn
  - Course website: https://imse317.github.io
- **IMSE 440 Applied Statistical Models in Engineering**, W20, W21, W22, W23, W24
  - Undergraduate course, University of Michigan-Dearborn

  - Course website: https://imse440.github.io

- **IMSE 586 Big Data Analytics and Visualization**, F18, F19, F20, F21, F22, F23, F25
  - Graduate course, University of Michigan-Dearborn
  - Course website: https://imse586.github.io
- **IOE 366 Linear Statistical Models**, F17
  - Undergraduate course, University of Michigan, Ann Arbor.
  - Co-instructed with Shan Bao
- **IMSE 577 User Interface Design and Analysis**, W17
  - Graduate course, University of Michigan-Dearborn.
  - Co-instructed with Shan Bao
- **IOE 474 Simulation** (Graduate Student Instructor), F10, F11, F12, W11, W12, W13
  - Undergraduate course, University of Michigan, Ann Arbor
  - *Highlight*: IOE Department 2012 Graduate Student Instructor of the Year Award (anonymously voted by students, one recipient per year)

Guest lecturer

- IMSE 501 Human Factors & Ergonomics, UM-Dearborn, F20, W21, F21
- IE 490 Computational Human Factors, Purdue University, Spring 2020
- IE 690 Sensing Approaches For Human Factors Research, Purdue University, Spring 2018
- IOE 836 Seminar in Human Performance, University of Michigan, Ann Arbor, F16, F17
- IE 486 Work Analysis and Design II, Purdue University, Spring 2017
- IE 590 Human Factors and Medical Devices, Purdue University, Spring 2017
- IE 386 Work Analysis and Design I, Purdue University, Spring 2016, Fall 2016

Workshops & tutorials

- "Python as an engineering tool", a 5-day short course for UM-Dearborn ESIEA international program, 2023, 2024, 2025
- UM Software Carpentry Python Workshop, March 2024
- "Data analysis in Python", Big Data Summer Institute, 2021 (recordings), 2022 (recordings), 2023 (recordings), 2024 (recordings), 2025
- "Introduction to git & GitHub", UM Software Carpentry Workshop, 2023
- "Introduction to data visualization on the web with D3.js", MIDAS Annual Symposium, 2021
- "Introduction to data analysis in Python", MI-LSAMP NxtGen STEM Scholars Program (for under-represented minority incoming freshmen), 2021
- "Machine learning pipelines and automated hyperparameter tuning", Ford Motor Company Themed Learning Series, 2021
- "Introduction to machine learning in Python with scikit-learn", Dearborn Artificial Intelligence Symposium, 2020 (recording)
- "Introduction to Python for Community and K-12 Teachers & Students", MIDAS Annual Symposium, 2020 (recording)
- "Introduction to Data Analysis in Python", IMSE Department Workshop, 2020 (recording)

Teaching certificates

- Certified Carpentries Instructor, The Carpentries, 2023

Students

Ph.D. students

- Rayane Moustafa, (2023-present)
- Gandhimathi Padmanaban (2021-present)
- Hanumad Vasanth Munnamgi (2019-present)

Ph.D. committees

- Dr. Zifei Wang, ISE, UM-Dearborn, PhD defense, 2026, Chair: Shan Bao
- Dr. Wael Hassanieh, ISE, UM-Dearborn, PhD defense, 2025, Chair: Abdallah Chehade
- Dr. Isaiah Oyewole, ISE, UM-Dearborn, PhD defense, 2025, Chair: Abdallah Chehade
- Dr. Dania Ammar, ISE, UM-Dearborn, PhD defense, 2024, Chair: Shan Bao
- Dr. Aishwary Pawar, ISE, UM-Dearborn, PhD defense, 2023, Chair: DeLean Tolbert Smith
- Dr. Mayuresh Savargaonkar, ISE, UM-Dearborn, PhD defense, 2023, Chair: Abdallah Chehade
- Dr. Jackie Ayoub, ISE, UM-Dearborn, PhD defense, 2022, Chair: Feng Zhou
- Dr. Zunya Shi, ISE, UM-Dearborn, PhD defense, 2021, Chair: Abdallah Chehade
- Dr. Kassem Moustafa, ISE, UM-Dearborn, PhD defense, 2020, Chair: Zhen Hu

Master's students

- Rayane Moustafa, UM-Dearborn, August 2023, Thesis: "Using Digital Lidar to Study Cycling Safety and Distance Estimation of Passing Vehicles"
- Gandhimathi Padmanaban, UM-Dearborn, August 2021, Thesis: "Computational Human Performance Modeling using Queuing Network in an Open-Source Platform"
- Ayah Hamad, UM-Dearborn, May 2021, Thesis: "Two Wheelistic: Development of a High-Fidelity Virtual Reality Cycling Simulator for Transportation Safety Research"

Undergraduate students

- Victoria De La Rue (2022-present), Christopher Salisbury (2022-2023), Amardeep Dhingra (2022-2023), Daniel Maudlin (2021), Callisto Hillard (2018-2020)

Awards

- University of Michigan-Dearborn Distinguished Research Team Award (part of a six-faculty team), 2026
- National Science Foundation Faculty Early Career Development (CAREER) Award, 2022
- Michael H. Scheller Fellowship, 2012-2013, 2014-2015
- University of Michigan IOE Department Graduate Student Instructor of the Year Award, 2012
- University of Michigan IOE Departmental Fellowship, 2009-2011
- Comprehensive Excellence Scholarship for Graduate Student at Tsinghua University, 2007
- Mitsubishi Scholarship for Outstanding Mechanical Engr. Student at Tsinghua University, 2006

Affiliations

- Michigan Institute for Data & AI in Society (MIDAS)
- Michigan Institute for Computational Discovery and Engineering (MICDE)
- The Carpentries at the University of Michigan
- University of Michigan Injury Prevention Center
- University of Michigan Poverty Solutions
- Dearborn Artificial Intelligence Research Center

Services

Professional services

Professional organizations

- Scientific Committee, International Cycling Safety Conference, 2020-present
- Member, Transportation Research Board (TRB) Bicycle Transportation Committee, 2023-2025
- Program Committee, AutoUI (International ACM Conference on Automotive User Interfaces), 2018, 2020, 2021, 2022

Reviewer

- Accident Analysis & Prevention
- Applied Ergonomics
- Human Factors and Ergonomics (HFES) Annual Meeting
- International Journal of Human-Computer Interaction
- IEEE Transactions on Intelligent Transportation Systems
- IEEE Transactions on Human-Machine Systems
- IEEE Intelligent Transportation Systems Magazine
- IEEE Access
- International ACM Conference on Automotive User Interfaces (AutoUI)
- International Cycling Safety Conference
- Transportation Research Part C: Emerging Technologies
- Transportation Research Part F: Traffic Psychology and Behaviour
- Transportmetrica A: Transport Science
- Transportation Research Board (TRB) Annual Meeting

Workshop organizer

- "Automated vehicles are pretty much here: How can human factors research help prepare drivers, lawmakers, educators, and the public?", Automated Vehicle Symposium 2017
- "Acquisition and maintenance of driving skills in the climate of driver support, driver assist, and automation systems", Transportation Research Board Annual Meeting 2017

Other services

- Webmaster: Surface Transportation Technical Group, Human Factors and Ergonomics Society, 2016-2018

Departmental services

Committees

- Member, IMSE Department Research Committee (2024-present)
- Member, IMSE Department Social Media Committee (2019-present)
- Member, IMSE Department PhD Qualifying Exam Committee (2019-present)
- Member, IMSE Department LEO Lecture Major Review Committee (2022)

Other services

- Faculty Secretary, IMSE Department (2019-2023)
- Department Liaison, HUB for Teaching and Learning (2021-2021)

College services

Committees

- Member, CECS Energy Systems Engineering Program Reform Committee (2021-2022)
- Member, CECS College Prominence Committee (2022-present)
- Member, CECS Online Education Strategic Planning Committee (2021-2022)
- Member, CECS Faculty Research Committee (2020)

Other services

- Digital Ambassador, CECS (2020-present)

University services

Committees

- Member, UM-Dearborn Urban Futures Strategic Planning Committee (2022)
- Member, UM-Dearborn Housing and Transportation Committee (2023)

Other services

- Faculty Senator, UM-Dearborn Faculty Senate, 2022-2028
- Faculty Senate Council, UM-Dearborn Faculty Senate, 2023-2024
- Volunteer Assistant Coach, University of Michigan Cycling Team (club sports), 2017-2021

Local community services

Membership

- Board of directors, Walk Bike Washtenaw, 2020-2024
- Member, Healthy Environments Action Team, Healthy Dearborn Coalition, 2020-2021
- Member, Dearborn Healthy Streets Project Planning Team, 2021

Invited talk & panelist

- Ann Arbor Bike Summit, 2023