

Alyssa Ryan, Ph.D.

Department of Civil & Environmental Engineering, Michigan State University
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EDUCATION

- FEB 2022 University of Massachusetts Amherst**
Doctor of Philosophy in Civil Engineering
'Equitable Resource Allocation to Improve Safety: An Evaluation Based on Risk'
Chair: Dr. Michael Knodler
- MAY 2019 University of Massachusetts Amherst**
Master of Science in Civil Engineering
'Driver Performance due to Unmanned Aerial System Applications in the Vicinity of Surface Transportation'
Chair: Dr. Michael Knodler
- FEB 2018 University of Massachusetts Amherst**
Bachelor of Science in Civil Engineering

EXPERIENCE

- 2025–PRESENT Michigan State University** East Lansing, MI
Assistant Professor
Department of Civil and Environmental Engineering
- 2021–2025 University of Arizona** Tuscon, AZ
Assistant Professor
Department of Civil and Architectural Engineering and Mechanics
- 2021–2025 University of Arizona** Tuscon, AZ
Assistant Director
Center for Applied Transportation Sciences (CATS)
- 2024–2025 University of Arizona** Tuscon, AZ
Assistant Professor (Courtesy Joint Appointment)
Department of Psychology
- 2020–2021 Technical University of Munich** Munich, Germany
Visiting Research Scholar
Chair of Transportation Systems Engineering
- 2018–2021 University of Massachusetts** Amherst, MA
Graduate Student Researcher
Department of Civil and Environmental Engineering, Transportation Group
- 2018 Vanasse Hangen Brustlin, Inc.** Boston, MA
Transportation Engineering Intern
- 2017–2018 Volpe National Transportation Systems Center** Cambridge, MA
Civil Engineer (Student Trainee)
- 2016 Binghamton Metropolitan Transportation Study** Binghamton, NY
Traffic Engineering Intern

2015 **Cape Cod Commission** Barnstable, MA
Traffic Technician Intern

HONORS & AWARDS

- 2025 Institute of Transportation Engineers (ITE) Mountain District Outstanding Educator Award
- 2025 Outstanding Younger Member Award, Transportation & Development Institute, American Society of Civil Engineers
- 2024 Mentor of the Year Award, Undergraduate Biology Research Program (UBRP) and Place-based Health Informatics Research Education (PHIRE), University of Arizona
- 2025 Lifesavers Conference on Roadway Safety Travel Award
- 2023 George H. Davis Travel Fellowship, Research, Innovation, & Impact Research Development Grant Program, University of Arizona
- 2023 Transportation Research Board Certificate of Recognition for Outstanding Support, Women and Gender in Transportation TRB Standing Committee (AME20)
- 2022 Inaugural Desai Travel Endowment Award, Department of Civil & Architectural Engineering & Mechanics, College of Engineering, University of Arizona
- 2022 ITE Young Leader to Follow
- 2022 Paper Selected, Elsevier's 2022 International Women's Day Special Issue
- 2022 Transportation Research Board Certification of Appreciation, Strategic Planning Standing Committee (AJE10)
- 2020, '22, '23 American Society of Civil Engineers Legislative Fly-In Travel Award (Unable to accept in 2023 due to conflicts)
- 2021 Ernest T. and Rae N. Selig Transportation Program Fellowship, UMass Amherst College of Engineering
- 2021 Runner-up, American Society of Civil Engineers Jack E. Leisch Memorial Graduate Fellowship
- 2021 Boston Society of Civil Engineers Section Clemens Herschel Award
- 2020, '21 Traffic Safety Scholar, Lifesavers Conference (2020 event canceled due to COVID-19)
- 2018, '19, '20 Dwight David Eisenhower Transportation Fellowship (Unable to accept 2020 grant due to conflicts with DAAD grant)
- 2020 U.S. Fulbright Study/Research Award - Germany Research (Unable to accept due to conflicts with DAAD grant)
- 2020 One-Year Research Grant for Doctoral Candidates, German Academic Exchange Service (DAAD)
- 2020 Northeastern ITE District Daniel B. Fambro Student Paper Award
- 2018, '20 ITE Upstate New York Section Scholarship
- 2020 Dean's Fellow, UMass Amherst College of Engineering
- 2019 Graduate Thomas E. Desjardins Scholarship, New England ITE
- 2019 TRB Women's Issues in Transportation Conference Travel Award
- 2019 Second Place, ITE & FHWA HSIS Research Paper Competition
- 2019 First Place Poster Award, ITE Northeastern District
- 2019 New England ITS Joseph Sussman Award
- 2019 WTS Rhode Island Leadership Legacy Award
- 2019 Third Place in Transportation Safety, ARTBA Student Video Contest
- 2018 Second Place Poster Award, ITE Northeastern District
- 2018 ITE Connecticut Chapter Scholarship
- 2018 Best Oral Presentation, SAFER-SIM UTC Conference

PUBLICATIONS

MSU or UArizona student, *student or postdoctoral direct advisee, †corresponding author

Refereed Journal Articles

34. Bhandari, S.*, Pan, M., and **Ryan, A.†** A Global Analysis of Gender Equity Measurement in Transportation: A Conceptual Framework. (Accepted) *Journal of Transportation Engineering, Part A: Systems*.
33. Bhandari, S.*†, **Ryan, A.**, Haule, H., and Wu, Y. (Accepted) Evaluating the Effectiveness of Red-Light Running Cameras on Intersection Crash Outcomes and Professional Perspectives. *Transportation Research Record*.
32. Haroon, S. M.*†, Panhorst, J.*, **Ryan, A.**, and Nasrin, S.* (2025) Comparing Steering Wheel Proximity: Differences in Seating Distance Between Male and Female Drivers. *Journal of Transport & Health*, 44:10211. [Link]
31. Haroon, S. M.*, Smith, E.*, and **Ryan, A.†** (2025) Optimizing Sound Alerts for Traveler Information Systems: Insights from a Driving Simulator and Eye Tracking Study. *Transportation Research Part F: Traffic Psychology and Behaviour*, 114:1077-1097. [Link]
30. Zhang, X.*, **Ryan, A.†**, and Wu, Y. (2025) Investigating Nighttime Driver Behaviors and Interactions at Pedestrian Hybrid Beacons. *Transportation Research Part F: Traffic Psychology and Behaviour*, 114:919-932. [Link]
29. Haroon, S. M.*, Ahmed, M.†, Mahmud, P., **Ryan, A.**, Jin, H., and Head, L. (2025) State-Level Emission Trends from Battery Electric Vehicle Adoption in the US. *Environment, Development and Sustainability*, [Link]
28. Haroon, S. M.*, Zhang, L., and **Ryan, A.†** (2025) How Commute Time and EV Ownership Shape Residential Cooling Energy Load Profiles. *Findings*, June. [Link]
27. Haroon, S. M.*† and **Ryan, A.** (2025) Who's Still Riding? Subgroup Analysis of Bicycling in the US. *Journal of Transport & Health*, 43:102057. [Link]
26. Panhorst, J.*† and **Ryan, A.** (2025) Pedestrian Fatalities and Their Demographic Disparities in the U.S. *Findings*, January. [Link]
25. DeBruin, H.* , **Ryan, A.†**, and Khani, A. (2024) Rural Transit Riders' Views on Contactless Fare Payment. *ITE Journal*. [Link]
24. Pan, M.*† and **Ryan, A.** (2024) Promoting Sustainable Transportation Modes: A Systematic Review of Behavior Change Strategies. *Transportation Research Record*, 2679(2):1993-2012. [Link]
23. Zhang, X.*†, **Ryan, A.**, and Wu, Y. (2024) Influential Factors of Pedestrian and Bicycle Crashes Near Pedestrian Hybrid Beacons: Observing Trends through an Applied Analysis. *Journal of Transportation Safety & Security*, 16(11):1307-1330. [Link]
22. Haroon, S. M.*† and **Ryan, A.** (2024) Understanding Key Factors in Automated Vehicle Collisions: Automating Data Extraction and Analyzing Key Insights using Explainable AI. *Journal of Transportation Safety & Security*, 16(11):1283-1306. [Link]
21. Pan, M.*†, Wong, S., Tainter, F., Woelfel, S., and **Ryan, A.** (2024) Integrating equity in transportation scenario planning: A systematic review. *Transport Policy*, 145:85-95. [Link]
20. Pan, M.*†, Isham, E., and **Ryan, A.** (2023) Developing a small participant framework: An investigation of mode choice influential factors. *Transportation Research Interdisciplinary Perspectives*, 22:100978. [Link]
19. Pan, M.*† and **Ryan, A.** (2023) How to select distracted driving countermeasures evaluation metrics: A systematic review. *Journal of Transportation Safety & Security*, 16(5):542-572. [Link]
18. **Ryan, A.†**, Ai, C., Fitzpatrick, C., and Knodler, M. (2023) Developing a Geospatial Safety Analysis Tool: A Systematic Approach to Identify Safety-Critical Horizontal Curve Segments and Hazardous Contributing Factors. *Journal of Transportation Engineering, Part A: Systems*, 149(7):04023051. [Link]

17. **Pan, M.*†** and **Ryan, A.** (2023) Segmenting the target audience for transportation demand management programs: An investigation between mode shift and individual characteristics. *International Journal of Sustainable Transportation*, 18(1):16-82. [Link]
16. **Pan, M.*†** and **Ryan, A.** (2023) Equity in Sustainable Transportation: An Investigation of Barriers and Individual and Contextual Factors. *Transportation Research Record*, 2677(5):1309–1329. [Link]
15. **Ryan, A.†**, Hennessy, E., Ai, C., Kwon, W., Fitzpatrick, C., and Knodler, M. (2022) Driver performance at horizontal curves: Bridging critical research gaps to increase safety. *New Traffic Safety Concepts Special Issue of Traffic Safety Research*, 3:000014. [Link]
14. **Pan, M.*†** and **Ryan, A.** (2022) Investigating Confirmation Bias in Transportation: An Analysis of Perceived Health Risk on Public Transit During the Pandemic. *Journal of Transport & Health*, 26:101485. [Link]
13. **Ryan, A.†**, Ai, C., Fitzpatrick, C., and Knodler, M. (2022) Crash proximity and equivalent property damage calculation techniques: An investigation using a novel horizontal curve dataset. *Accident Analysis & Prevention*, 166:106550. [Link]
12. **Ryan, A.†** and Knodler, M. (2022) Influential crash conditions leading to injury differences experienced by female and male drivers. *Journal of Transport & Health*, 24:101293. [Link] (*Selected for Elsevier's 2022 International Women's Day Special Issue*)
11. **Ryan, A.†**, Barchers, C., Christofa, E., and Knodler, M. (2021) Equitable resource allocation for municipal safety: A data envelopment analysis. *Transportation Research Part D: Transport and Environment*, 97:102926. [Link]
10. **Ryan, A.†** and Knodler, M. (2021) What Type of Crash Can We Expect? Designing for Safety at Common Traffic Control Devices. *ITE Journal*, 94(6):34–38. [Link]
9. Zafian, T., **Ryan, A.†**, Agrawal, R., Samuel, S., and Knodler, M. (2021) Using SHRP2 NDS data to examine infrastructure and other factors contributing to older driver crashes during left turns at signalized intersections. *Accident Analysis & Prevention*, 156:106141. [Link]
8. **Ryan, A.†**, Christofa, E., Barchers, C., and Knodler, M. (2021) The relationship between municipal highway expenditures and socio-demographic status: Are safety investments equitably distributed? *Transportation Research Interdisciplinary Perspectives*, 9:100321. [Link]
7. **Ryan, A.†**, Ai, C., Knodler, M., and Fitzpatrick, C. (2021) Evaluation of small unmanned aerial system highway volume and speed-sensing applications. *IET Intelligent Transportation Systems*, 15(1):84–97. [Link]
6. **Ryan, A.†**, Tainter, F., Fitzpatrick, C., Gazzillo, J., Riessman, R., and Knodler, M. (2020) The impact of sex on motor vehicle crash injury outcomes. *Journal of Transportation Safety & Security*, 14(5):818–842. [Link]
5. **Ryan, A.†**, Page, M., Christofa, E., Fitzpatrick, C., and Knodler, M. (2020) Linking geospatial crash and citation data to inform equitable decisions. *Journal of Transportation Safety & Security*, 14(2):256–279. [Link]
4. **Ryan, A.†**, Fitzpatrick, C., Christofa, E., and Knodler, M. (2020) Driver performance due to small unmanned aerial system applications in the vicinity of roadways. *Transportation Research Part F: Psychology and Behaviour*, 68:118–131. [Link]
3. **Ryan, A.†**, Casola, E., Fitzpatrick, C., and Knodler, M. (2019) Flashing yellow arrows for right turn applications: A driving simulator study and static evaluation analysis. *Transportation Research Part F: Psychology and Behaviour*, 66:324–338. [Link]

2. **Ryan, A.[†]**, Bouchard, C., Fitzpatrick, C., Knodler, M., and Ahmadjian, C. (2019) Analytical Comparison of Core Competencies across Civil Engineering Positions within New England Department of Transportation Agencies. *Transportation Research Record*, 2673(1):427–437. [Link]
1. Tainter, F.[†], **Ryan, A.**, Fitzpatrick, C., Christofa, E., and Knodler, M. (2018) Evaluation of Downstream Merge Behaviors Resulting from Driver Lane Choice: A Driving Simulator Study. *Transportation Research Record*, 2672(37):123–131. [Link]

Manuscripts Under Review

10. Leu, P., Haroon, S. M.*, Khadka, S., **Ryan, A.[†]**, and Zhang, L. Leveraging AI Techniques to Facilitate User-Friendly Transportation Data Retrieval for Speed and Volume Data. *Submitted to the Journal of Transportation Engineering, Part A: Systems.*
9. Bhandari, S.*, Cottam, A., Zhang, X., **Ryan, A.[†]**, and Wu, Y. Integrating Crowdsourced Speed and Crash Data for Statewide Traffic and Road Safety Enhancement. *Submitted to the Transportmetrica A: Transport Science.*
8. Tork, N., Emami, B., Baek, K., Khani, A.[†], Bhandari, S.*, and **Ryan, A.** Charger Deployment and Fleet Sizing for Heterogeneous Fleets Under Budget-Constrained Multi-Stage Electrification. *Submitted to Transportation Research Part D: Transport & Environment.*
7. **Ryan, A.[†]** Embedding Equity in Civil Engineering Curricula: A Case Study from an Introductory Transportation Course. *Submitted to the Journal of Civil Engineering Education.*
6. Bhandari, S.*, Panhorst, J.*, **Ryan, A.[†]**, Tork, N., Baek, K., and Khani, A. Psychological and Operational Barriers to Public Electrical Vehicle Fleet Adoption. *Submitted to Transportation Research Part D: Transport & Environment.*
5. Raha, F.*, Russo, B., and **Ryan, A.[†]** Investigating the Impact of the COVID-19 Pandemic on Traffic Crash Injury Outcomes among Different Demographic Groups. *Revised and resubmitted to Findings.*
4. Shen, Y.* and **Ryan, A.[†]** Deep Learning and Spatial Analysis Framework for Perception-Based Urban Study: The Case of Transit Environments and Social Isolation *Submitted to the Journal of Transport Geography.*
3. Panhorst, J.* and **Ryan, A.[†]** Who Investigating Walkability and Affordable Housing Through a Multi-City Urban Analysis. *Submitted to Journal of Urban Planning and Development.*
2. Shen, Y.*, **Ryan, A.[†]**, Pan, M., Fu, X., and Zhang, L. Behavioral and Infrastructure Influences on Electric Vehicle Charging and Grid Impact. *Revised and resubmitted to Transportation Research Part D: Transport & Environment.*
1. Shen, Y.* and **Ryan, A.[†]** Exploring the Intersection of Gender with Walking, the Built Environment, and Health Outcomes via the All of Us Dataset. *Revised and resubmitted to the Journal of Transport Geography.*

Conference Papers & Extended Abstracts

23. Ebrahimi, Z.* and **Ryan, A.[†]** (2025) A GIS-Based Approach to Analyzing Public Transit Accessibility and Service Equity with Public Data: An Application in Southern Arizona. *Proceedings from the ASCE International Conference on Transportation & Development*, 8–11 June, Glendale, AZ. [Link]
22. Haroon, S. M.*[†], Ahmed, M., Mahmud, P., **Ryan, A.**, Jin, H., and Head, K. (2025) State-Level Emission Changes from Electric Vehicle Adoption in the US. Paper Number 25-04162. Poster. *Transportation Research Board 104th Annual Meeting*, 5–9 January, Washington, D.C.
21. Bhandari, S.*[†], **Ryan, A.**, Haule, H., and Wu, Y. (2025) Evaluating Red-Light Cameras: A Comprehensive Study on Effectiveness and Professional Perspectives. Paper Number 25-04259. Poster. *Transportation Research Board 104th Annual Meeting*, 5–9 January, Washington, D.C.

20. Bhandari, S.*†, Cottam, A., Zhang, X., **Ryan, A.**, and Wu, Y. (2025) Integrating Crowdsourced Speed Data and Crash Data for Statewide Traffic Management and Road Safety Enhancement. Paper Number 25-03318. *Transportation Research Board 104th Annual Meeting*, 5–9 January, Washington, D.C.
19. Haroon, S. M.*† and **Ryan, A.** (2024) Unlocking Insights into Driver Inattention: A Holistic Statistic and Big Data Analysis. Paper Number 31. *Proceedings from the Road Safety & Simulation International Conference*, 28–31 October, Lexington, KY. [Link]
18. Bhandari, S.*†, **Ryan, A.**, Haule, H., and Wu, Y. (2024) Navigating the Road to Safety: The Role of Automated Enforcement in the Metro Phoenix Region. Paper Number 28. *Proceedings from the Road Safety & Simulation International Conference*, 28–31 October, Lexington, KY. [Link]
17. Haroon, S. M.*†, De Luna Gutierrez, C.*, Bhandari, S.*, **Ryan, A.**, and Haule, H. (2024) Comprehensive Analysis of Red-Light Running in the US: Strategies, Successes, and Future Directions. *Proceedings from the ASCE International Conference on Transportation & Development*, 15–18 June, Atlanta, GA. [Link]
16. Haroon, S. M.*† and **Ryan, A.** (2024) Examining the evolution of cycling patterns among males and females in the United States: Findings from the National Household Travel Surveys. Paper Number 24-00462. *Transportation Research Board 103th Annual Meeting*, 7–11 January, Washington, D.C.
15. Haroon, S. M.*† and **Ryan, A.** (2024) Insights into Automated Vehicle Collisions: Explainable AI Models and Comparison with Non-Automated Vehicles. Paper Number 24-00697. *Transportation Research Board 103th Annual Meeting*, 7–11 January, Washington, D.C.
14. De Luna Gutierrez, C.*†, Haroon, S. M.*, and **Ryan, A.** (2024) An Evaluation of Red Light Running Camera and Vision Zero Implementation in the United States. Paper Number 24-00560. *Transportation Research Board 103th Annual Meeting*, 7–11 January, Washington, D.C. *Invited Student Paper, TRB Minority Fellows Program*.
13. Raha, F.*†, Russo, B., and **Ryan, A.** (2024) Investigating the Impact of the COVID-19 Pandemic on Traffic Crash Injury Outcomes among Different Demographic Groups. Paper Number 24-00688. *Transportation Research Board 103th Annual Meeting*, 7–11 January, Washington, D.C.
12. Pan, M.*†, Wong, S., Tainter, F., Woelfel, S., and **Ryan, A.** (2024) Integrating Equity in Transportation Scenario Planning: A Systematic Review. Paper Number 24-00040. Poster. *Transportation Research Board 103th Annual Meeting*, 7–11 January, Washington, D.C.
11. Pan, M.*† and **Ryan, A.** (2022) How likely will a mode shift occur? – Evaluating the demographic and location differences between potential and existing users of sustainable transportation modes. *Human Factors & Ergonomics Society 66th International Annual Meeting*, 10–14 October, Atlanta, GA. *Proceedings of the Human Factors & Ergonomics Society Annual Meeting*, 66(1):330–334. [Link]
10. **Ryan, A.†**, Hennessy, E., Ai, C., Kwon, W., Fitzpatrick, C., and Knodler, M. (2022) Driver performance at horizontal curves: Bridging critical research gaps to increase safety. Paper Number 7. *Proceedings from the Road Safety & Simulation International Conference*, 8–10 June, Athens, Greece.
9. Ezzati Amini, R.†, Al Haddad, C., Batabyal, D., **Ryan, A.**, Gkena, I., De Vos, B., Cuenen, A., Brijs, T., and Antoniou, C. (2022) Analyzing driver eye movements to investigate the impact of distraction on driving behaviour. Paper Number 90. *Proceedings from the Road Safety & Simulation International Conference*, 8–10 June, Athens, Greece.
8. **Ryan, A.†**, Page, M., Christofa, E., Fitzpatrick, C., and Knodler, M. (2020) Linking Geospatial Crash and Citation Data to Optimize the Deployment of Enforcement Resources in Speed Management. Paper Number 20-05266. Podium. *Transportation Research Board 99th Annual Meeting*, 12–16 January, Washington, D.C.

7. **Ryan, A.[†]** and Knodler, M. (2019) Evaluating Crash Type Likelihood at Various Traffic Control Devices: A Multinomial Logistic Regression Approach Using HSIS Data. Paper Number 20-04710. Poster. *Transportation Research Board 99th Annual Meeting*, 12–16 January, Washington, D.C.
6. **Ryan, A.[†]**, Fitzpatrick, C., Knodler, M., and Christofa, E. (2019) A simulator study on the impact of driver distraction due to drones based on prior experiences and perspectives of drones. Paper Number 24. Poster. *Proceedings from the Road Safety & Simulation International Conference*, 14–17 October, Iowa City, IA. [Link]
5. **Ryan, A.[†]**, Tainter, F., Fitzpatrick, C., Gazzillo, J., Riessman, R., and Knodler, M. (2019) The impact of sex on injury outcomes associated with motor vehicle crashes through a linked analysis of crash and EMS data. Podium. *Proceedings from the 6th International Conference on Women's Issues in Transportation*, 10–13 September, Irvine, CA.
4. **Ryan, A.[†]**, Bouchard, C., Fitzpatrick, C., Knodler, M., and Ahmadjian, C. (2019) An Analytical Comparison of Core Competencies Across Civil Engineering Positions Within New England Department of Transportation Agencies. Paper Number 19-01587. Podium. *Transportation Research Board 98th Annual Meeting*, 13–17 January, Washington, D.C.
3. **Ryan, A.[†]**, Casola, E., Fitzpatrick, C., and Knodler, M. (2018) Flashing Yellow Arrow For Right Turns: A Driving Simulator Study. Paper Number 2018-6088. Podium. *Proceedings from the European Transport Conference*, 10–12 October, Dublin, Ireland. [Link]
2. Tainter, F.[†], **Ryan, A.**, Fitzpatrick, C., and Knodler, M. (2018) Evaluation of Downstream Merge Behaviors Resulting from Driver Lane Choice: A Driving Simulator Study. Paper Number 18-03610. Podium. *Transportation Research Board 97th Annual Meeting*, 7–11 January, Washington, D.C.
1. **Ryan, A.[†]**, Tainter, F., Fitzpatrick, C., Page, M., Christofa, E., and Knodler, M. (2017) Alternative Merge Design at Intersection Downstream Corridors: A Driving Simulation Study. Paper Number 357. Podium. *Proceedings from the Road Safety & Simulation International Conference*, 17–19 October, The Hague, Netherlands. [Link]

Project Reports

9. **Ryan, A.**, Liang, Z., Pan, M., Shen, Y.*, and Fu, X. (2025) *Bridging Gaps Towards a Sustainable Energy Future by Applying Human Factors in Transportation Building Integration*. Final Report. University of Arizona Research Innovation, & Impact (RII) 2024 National Labs Partnerships Grants.
8. Khadka, S., Pei-Yu, L., Haroon, S. M.*, **Ryan, A.**, and Zhang, L. (2024) *AI-Enhanced Interactive Data Infrastructure: Paving the Way for Building and Transportation Decarbonization*. Final Report. University of Arizona Institute for Energy Solutions, Arizona Institute for Resilience. [Link]
7. **Ryan, A.**, Wu, Y., Haule, H., and Bhandari, S.*. (2024) *Investigating the Safety Effectiveness of Red-Light Running Cameras*. Final Report. City of Phoenix. [Link]
6. **Ryan, A.**, Denninghoff, A.*, Bhandari, S.*, Andrews, A., Schneider, K., Mohebbi, M., Young, R., Hough, J., and Koonce, P. (2023) *Case Studies of Equity in Transportation Practices*. Technical Brief by Case Studies Subcommittee of the ITE Equity Committee. Institute of Transportation Engineers. [Link]
5. Lubitow, A., Carpenter, E., Brown, A., Canham, S., Crutchfield, J., Larco, N., and **Ryan, A.** (2022) *NITC Research Roadmap: A decade of transportation equity research*. Final Report. National Institute for Transportation and Communities, University Transportation Center. [Link]
4. Fitzpatrick, C., Knodler, M., **Ryan, A.**, and Christofa, E. (2020) *The Influence of Unmanned Aerial Systems on Driving Performance*. Final Report. Safety Research Using Simulation, University Transportation Center. [Link]

3. Fitzpatrick, C., Knodler, M., **Ryan, A.**, Ai, C., and Chen, D. (2019) *The Application of Unmanned Aerial System In Surface Transportation - Volume II - C: Evaluation of UAS Highway Speed-Sensing Application*. Final Report 19-010. Massachusetts Department of Transportation. [Link]
2. Ahmadjian, C., Knodler, M., **Ryan, A.**, and Bouchard, C. (2018) *Measuring the Effectiveness of Competency Models of Job-Specific Professional Development of Engineers & Engineering Technicians: A Comparison of Core Competencies Across Civil Engineering Positions of Department of Transportation Agencies using Competency Models*. Final Report 14-1. New England Transportation Consortium. [Link]
1. Richardson, H., Kittredge, D., **Ryan, A.**, Hallett, R., and Secunda, S. (2018) *Transportation Asset Mapping & Data Compilation*. Project Summary Report DOT-VNTSC-NPS-18-07. John A. Volpe National Transportation Systems Center. [Link]

Other Publications

4. Cook-Davis, A., Eustice, K., Nagle, A., Cooper, A., Kurtz, L. C., and Kanala, C. (Authors). Contributors/Editors: Abboud, A., Kwarteng, O. A., George-Blazevich, P., Guo, S., Heid, J., Jaramillo, A., **Ryan, A.**, Solis, P., Kuhlmann, D., Panhorst, J., Perez, L., Pfeiffer, D., Whitsett, A., Winson-Geideman, K., and Wong, K. (2025) *State of Housing in Arizona 2025*. Arizona Research Center for Housing Equity and Sustainability. [Link]
3. Chalmers, S. (Author). Development Team: Argo, R., Brown, H., Carlson, P., Gieselman, A., Kusano, K., Hawkins, N., Herstam, J., Russo, B., **Ryan, A.**, Venne, H., and Zucco, F. (2025) *SAE Edge Research Report: The Challenges of Next-gen ADAS and ADS and Related Vehicle Safety Topics*. Society of Automotive Engineers International. [Link]
2. Nallamotheu, V., **Ryan, A.**, Alluri, P., and Ortiz, C. (2024) *2024 ITE Developing Trend: Use and Application of Artificial Intelligence in Transportation*. ITE Journal, 97, 16–19. [Link]
1. Bhandari, S.*, **Ryan, A.**, Hennessey, D., McElwee, M., Mohebbi, M., Koonce, P., Young, R., Jenkins, J., Alfaseeh, L., Torres, L., Yakumithis, L., Shaheed, M., Gundani, N., and Karbalaieali, S. (2023) *QuickBite on Current Case Studies - Examples of Practices of Equity in Transportation*. QuickBite Report. Institute of Transportation Engineers. [Link]

RESEARCH SUPPORT

External Support

23. **Ryan, A. (PI, until summer 2025 due to transition to Michigan State University)**, Ozer, H. (External Co-PI), Hongki, J. (Co-PI), Bheemasetti, T. (Co-PI), Dymond, B. (External Co-PI), Russo, B. (External Co-PI), and Kaloush, K. (External Co-PI). Arizona Transportation Institute, Arizona Department of Transportation. “SPR-788: Assessing the Consumption Costs of Motor Vehicles on Arizona Roads and Bridges,” 10/1/2024 to 9/30/2026, \$480,000; \$127,000 (Ryan).
22. Russo, B. (External PI), **Ryan, A. (Co-PI, until summer 2025 due to transition to Michigan State University)**, Gehrke, S. (External Co-PI), and Smaglik, E. (External Co-PI). Arizona Transportation Institute, Arizona Department of Transportation. “SPR-789: Development of Arizona-Specific Crash Modification Factors,” 8/1/2024 to 7/31/2026, \$200,000; \$50,000 (Ryan).
21. **Ryan, A. (PI, until summer 2025 due to transition to Michigan State University)** and Bratt, S. (Co-PI). Arizona Transportation Institute, Arizona Department of Transportation. “SPR-793: Exploring the Development of a Research Data Management Plan,” 8/12/2024 to 8/11/2025, \$125,000; \$81,250 (Ryan).
20. Wu, Y. (PI) and **Ryan, A. (Co-PI)**. City of Yuma. “Traffic Engineering Tech Support for the City of Yuma (Phase 2),” 7/1/2024 to 6/30/2025, \$60,000 (Total); \$30,000 (Ryan).
19. Khani, A. (External PI) and **Ryan, A. (Co-PI)**. Minnesota Local Road Research Board. “Transitioning to EV Fleets: Best Practices and A Decision Tool,” 5/1/2024 to 12/31/2025, \$188,000 (Total); \$25,000 (Ryan).

18. Wu, Y. (PI), Li, X. (Co-PI), **Ryan, A. (Key Person, until summer 2025 due to transition to Michigan State University)**, and Haule, H. (Key Person). National Cooperative Highway Research Program. "NCHRP 07-34: Artificial Intelligence for Transportation Systems Management and Operations Applications," 4/15/2024 to 10/14/2026, \$450,000 (Total); \$90,000 (Ryan).
17. **Ryan, A. (PI)**, Hurwitz, D. (External Co-PI), and Waller, M. (Key Person). AAA Foundation for Traffic Safety. "Examining Equity in Traffic Safety: A National Perspective and Case Studies in Several States," 12/1/2023 to 6/6/2025, \$461,314 (Total); \$415,182.60 (Ryan).
16. **Ryan, A. (PI)**. Maricopa Association of Governments. "AZ 511 App: An investigation of best app operating practices for engagement," 12/1/2023 to 12/31/2024, \$60,000; \$60,000 (Ryan).
15. Kuhlmann, D. (PI), Jaramillo, A. (Co-PI), Kear, M. (Co-PI), Bean, J. (Co-PI), Wong, K. (Co-PI), **Ryan, A. (Co-PI, until summer 2025 due to transition to Michigan State University)**, Adkins, A. (Co-PI), and Crosson, C. (Co-PI). Subaward to Arizona State University. Prime Sponsor: U.S. Department of Housing and Urban Development. "The Arizona Research Center for Housing Equity and Sustainability (ARCHES) HSI Center of Excellence," 10/1/2023 to 9/30/2026, \$1,000,000 (Total); \$150,000 (Ryan).
14. Currans, K. (PI), Adkins, A. (Co-PI), and **Ryan, A. (Co-PI)**. Portland State University, National Institute for Transportation and Communities University Transportation Center, U.S. D.O.T. "UA Core Campus Activities 2023-2024," 9/1/2023 to 6/30/2024, \$30,000 (Total); \$10,000 (Ryan).
13. Wu, Y. (PI) and **Ryan, A. (Co-PI)**. City of Yuma. "Traffic Engineering Tech Support for the City of Yuma," 7/1/2023 to 6/30/2024, \$60,000; \$30,000 (Ryan).
12. **Ryan, A. (PI)** and Wu, Y. (Co-PI). City of Phoenix. "Investigating the Safety Effectiveness of Red Light Running Cameras," 4/1/2023 to 5/31/2024, \$149,801 (Total); \$112,351 (Ryan).
11. Currans, K. (PI), Adkins, A. (Co-PI), and **Ryan, A. (Co-PI)**. Portland State University, National Institute for Transportation and Communities University Transportation Center, U.S. D.O.T. "UA Core Campus Activities 2022-2023," 7/1/2022 to 8/31/2023, \$75,000 (Total); \$24,750 (Ryan).
10. Currans, K. (PI), Adkins, A. (Co-PI), and **Ryan, A. (Co-PI)**. Portland State University, National Institute for Transportation and Communities University Transportation Center, U.S. D.O.T. "National Institute for Transportation and Communities Year 5 Executive Committee," 7/1/2022 to 8/31/2023, \$25,000 (Total); \$8,250 (Ryan).
9. Wu, Y. (PI) and **Ryan, A. (Co-PI)**. Metropia, Inc. "Technical Support for Metropia Data Analytics and DynusT Modeling (Phase 2)," 12/2/2021 to 6/30/2022, \$66,271 (Total); \$33,135 (Ryan).
8. Currans, K. (PI), Iroz-Elardo, N. (Co-PI), Karimpour, A. (Co-PI), and **Ryan, A. (Co-PI)**. Portland State University, National Institute for Transportation and Communities University Transportation Center, U.S. D.O.T. "Land Use and Transportation Roadmap," 8/1/2021 to 8/31/2022, \$25,231 (Total); \$6,308 (Ryan).
7. **Ryan, A.** Dwight David Eisenhower Transportation Fellowship, U.S. D.O.T. Grant Agreement 693JJ32145002. 2020–2021. Offered award of \$35,500. Unable to accept due to conflicts with DAAD grant.
6. **Ryan, A.** Fulbright. Study/Research Award - Germany Research. 2020–2021. Offered award of €11,750. Unable to accept due to COVID-related delayed start date and conflicts with DAAD grant.
5. **Ryan, A.** German Academic Exchange Service (DAAD). Grant ID 57507870. One-Year Research Grant for Doctoral Candidates. 2020–2021. €13,010.
4. Ai, C. (PI), Fitzpatrick, C. (PI), and **Ryan, A. (Primary Author)**. Safety Research Using Simulation (SAFER-SIM) Tier 1 University Transportation Center, U.S. D.O.T. "Deflection Angle Effect on Continuous Driver Performance Along Horizontal Curves," 2020–2021.

3. **Ryan, A.** Dwight David Eisenhower Transportation Fellowship, U.S. D.O.T. Grant Agreement 93JJ32045003. 2019–2020. \$35,500.
2. Fitzpatrick, C. (PI), Knodler, M. (PI), and **Ryan, A. (Primary Author)**. Safety Research Using Simulation (SAFER-SIM) Tier 1 University Transportation Center, U.S. D.O.T. “The Influence of Unmanned Aerial Systems on Driving Performance.” 2019–2020.
1. **Ryan, A.** Dwight David Eisenhower Transportation Fellowship, U.S. D.O.T. Grant Agreement 93JJ31945069. 2018–2019. \$5,000.

Internal Support

4. **Ryan, A. (PI)** and Zhang, L. (Co-PI). University of Arizona Research Innovation, & Impact (RII) 2024 National Labs Partnerships Grants. “Bridging Gaps Towards a Sustainable Energy Future by Applying Human Factors in Transportation Building Integration,” 6/25/2024 to 7/31/2025, \$35,725. *In partnership with Oak Ridge National Laboratory.*
3. **Ryan, A. (PI)**. University of Arizona Hispanic Serving Institution (HSI) Seed Grant, Research Innovation, & Impact (RII), Hispanic Serving Institution Initiatives, and the Office of the Provost. “Socioeconomic Status Impacts Transportation Accessibility Among Elderly Hispanic Individuals with Mental and Physical Disabilities in Arizona,” 8/1/2024 to 6/30/2025, \$15,000.
2. Zhang, L. (PI) and **Ryan, A. (Co-PI)**. University of Arizona Institute for Energy Solutions, Arizona Institute for Resilience. “AI-Enhanced Interactive Data Infrastructure: Paving the Way for Building and Transportation Decarbonization,” 1/1/2024 to 6/30/2024, \$42,376.
1. **Ryan, A.** University of Massachusetts Amherst Graduate School. Fall 2019 Graduate School Predissertation Research Grant. 2019–2020. \$924.

PRESENTATIONS

UArizona or MSU student, *student or postdoctoral advisee, †presenter(s)

Invited Talks

58. **Ryan, A.†** (2025) Crash Data in Arizona: Opportunities and Gaps in the Modernization Era. *Towards the Modernization of State DOTs’ Crash Data Systems, 2025 Safe Mobility Conference, 7–9 April, Madison, WI.*
57. **Ryan, A.†** (2025) Gender, Safety, and the Future of Transportation. *District Department of Transportation Celebrates Women’s History Month: Advancing Transportation Safety for Women, 20 March, online.*
56. **Ryan, A.†** (2025) Understanding Human Factors: The Science Behind Driver Behavior & Distraction. *Education & Innovation: Shaping the Future of Safe Driving Culture, Distracted Driving Track, Lifesavers Conference, 9–11 March, Long Beach, CA.*
55. **Ryan, A.†** (2024) Red Light Running Cameras: A Case Study in the City of Phoenix. *Southern Arizona Institute of Transportation Engineers Meeting, 17 September, online.*
54. **Ryan, A.†** (2024) The Impact of Remote Work in the Engineering Industry on Women’s Effectiveness and Productivity. Panel. *7th International Conference on Women and Gender in Transportation, 9–11 September, Irvine, CA.*
53. **Ryan, A.†** (2024) Red Light Running Camera Study. *Vision Zero – Road Safety Action Plan Community Advisory Committee Meeting, 21 August, Phoenix, AZ.*
52. **Ryan, A.†** (2024) Active Safety and the Challenge of Vehicle Autonomy. *Society of Automotive Engineers International Mobility Frontier Webinar 6: Reducing Human Driver Error: Setting Realistic Expectations with Advanced Driver Assistance Systems, 5 June, online.*

51. **Ryan, A.[†]** (2024) Using Driving Simulators to Improve Infrastructure Safety: Application Examples. *Southern Arizona Branch ASCE Luncheon*, 30 May, Tucson, AZ.
50. **Ryan, A.[†]** (2024) Equity in Transportation: An Overview. *Equity in Transportation Panel Discussion, Women's Transportation Seminar Metropolitan Phoenix Chapter*, 11 April, Phoenix, AZ.
49. **Haroon, S. M.^{*†}**, and **Ryan, A.** (2024) Innovative analyses with crash data: New ways of identifying and analyzing hot spots for countermeasure selection. *Arizona Institute of Engineers and International Municipal Signal Association Annual Spring Conference*, 3–4 April, Phoenix, AZ.
48. **Ryan, A.[†]** and **Haroon, S. M.^{*†}** (2024) AZ 511 App: An investigation of best app operating practices for engagement. *Arizona Institute for Automated Mobility Bi-Monthly Meeting*, 27 March, online.
47. **Ryan, A.[†]** (2024) Overview of the Ryan Research Group at UArizona's Driving Simulator Laboratory. *Standing Committee on Road User Measurement and Evaluation (ACH50), Transportation Research Board 103th Annual Meeting*, 7–11 January, Washington, D.C.
46. **Haroon, S. M.^{*†}** and **Ryan, A.[†]** (2024) General Pedestrian Conspicuity Research Summary. *Can You See Me?: Vulnerable Road User Conspicuity Research Plan Workshop, Transportation Research Board 103th Annual Meeting*, 7–11 January, Washington, D.C.
45. **Ryan, A.[†]** (2023) Equity in Transportation Overview. *Equity in Transportation Operations, National Operations Center of Excellence*, 20 December, online webinar.
44. **Ryan, A.[†]** (2023) An Introduction to Transportation Safety. *Transport Engineering and Pavement Design (CE 363), University of Arizona*, 30 October, Tucson, AZ.
43. **Ryan, A.[†]** (2023) Investing in Gender: Physical Designs for a Gender-Inclusive Transportation System. *Gender Foresight Session, 27th World Road Congress*, 2–6 October, Prague, Czech Republic.
42. **Ryan, A.[†]** (2023) Considering Equity in Transportation Projects: New Knowledge and Identified Practices. *Institute of Transportation Engineers Southern California Section Meeting Equity Series*, 20 September, online.
41. **Ryan, A.[†]** (2023) A Conversation on Gender Safety: The Intersection of Physical Safety and Personal Security. *Transportation Research Board Women & Gender in Transportation Standing Committee Midyear Meeting*, 6 September, online.
40. **Ryan, A.[†]** (2023) Saving Lives through Advanced Technologies through the Lens of Human Factors! - The Science You Need to Know! *ITS Arizona Technical Workshop/Luncheon*, 27 June, Mesa, AZ.
39. **Ryan, A.[†]** (2023) Designing Infrastructure and Emerging Technology to Consider Real Behavior: Applications in Driving Simulation. *Maricopa Association of Governments Transportation Technologies Working Group Meeting*, 6 June, Phoenix, AZ.
38. **Ryan, A.[†]** and **Haroon, S. M.^{*†}** (2023) Designing for mixed fleet conditions: Autonomous vs. non-autonomous vehicle crash outcomes in California. *American Association of State Highway and Transportation Officials Towards Zero Deaths Subcommittee Meeting*, 22 May, online.
37. **Ryan, A.[†]** (2023) Moderator & Discussant, Technology and Autonomous Vehicles. *64th Transportation Research Forum*, 27–28 April, Chicago, IL.
36. **Haroon, S. M.^{*†}** and **Ryan, A.[†]** (2023) Driver Behavior & Designing for Different Behaviors. *Arizona Institute of Engineers and International Municipal Signal Association Annual Spring Conference*, 11-13 April, Phoenix, AZ.
35. **Ryan, A.[†]** (2023) An Assistant Professor's First Year: What I Learned and Starting New Research Endeavors. *Winter 2023 Transportation Seminar Series, Oregon State University*, 17 February, online.
34. **Ryan, A.[†]** (2023) Leadership in a Hybrid World. *Institute of Transportation Engineers*, 8 February, online.

33. **Ryan, A.[†]** (2022) Using Scenario Planning to Drive Change. *American Association of Highway and Transportation Officials 2022 Conference on Performance-Based Management, Planning, and Data Management and Analytics, "Connecting the DOTs for an Adaptable, Agile, and Equitable Future,"* 5–8 December, Providence, RI.
32. **Ryan, A.[†]** (2022) An Introduction to Transportation Safety Equity. *Transport Engineering and Pavement Design (CE 363), University of Arizona,* 31 October, Tucson, AZ.
31. **Ryan, A.[†]** (2022) Engineers Talk Writing. *Graduate Writing Lab, University of Arizona,* 5 October, online.
30. **Ryan, A.[†]** (2022) Current ITS Research at UArizona. *ITS Norway Delegation Visit, Arizona Commerce Authority Luncheon,* 23 September, Phoenix, AZ.
29. **Ryan, A.[†]** (2022) How Do You Plan to Integrate Scenario Planning into Your Agency. *Transportation Research Board Scenario Planning Conference,* 19-21 September, Washington, D.C.
28. **Ryan, A.[†]** (2022) Applications of Driving Simulation: Analysis of Driver Behavior to Improve Safety. *University of Arizona Institute of Transportation Engineers Student Chapter,* 14 September, Tucson, AZ.
27. **Ryan, A.[†]** (2022) Closing Remarks. *Advanced Mobility Arizona Workshop, Arizona State University,* 9 September, Scottsdale, AZ.
26. **Ryan, A.[†]** (2022) Brown Bag: Gender and Experiences of Personal Safety in Transportation. *Minneapolis-St. Paul Chapter, Transportation Research Forum,* 26 August, online.
25. **Ryan, A.[†]** (2022) Virtual Roundtable: Thriving in nontraditional engineering paths. *American Society of Civil Engineers,* 21 July, online.
24. **Ryan, A.[†]** (2022) Equity in Engineering: Perspectives in Transportation. *Cognitive and Autonomous Test (CAT) Vehicle Research Experience for Undergraduates, University of Arizona,* 22 June, Tucson, AZ.
23. **Pan, M.*[†]** and **Ryan, A.[†]** (2022) The Relationship Between Transportation Safety & Equity. *Arizona Institute of Engineers and International Municipal Signal Association Annual Spring Conference,* 17-19 May, Phoenix, AZ.
22. **Ryan, A.[†]** (2022) Human factors in transportation: Understanding users and their behaviors to improve safety. *Arizona Institute of Engineers and International Municipal Signal Association Annual Spring Conference,* 17-19 May, Phoenix, AZ.
21. **Ryan, A.[†]** (2022) Towards Equitable Road Safety: Vehicular Design and Resource Allocation Methods. *Arizona Institute of Engineers Meeting,* 24 February, Phoenix, AZ.
20. **Ryan, A.[†]** (2021) Applications of Flashing Yellow Arrows at Right Turns. Does it Improve Ped & Bike Safety? *MassDOT Moving Together Conference,* 8 December, online.
19. **Ryan, A.[†]** (2021) Understanding the Driver: Applications of Driving Simulation for Transportation Safety. *Systems and Industrial Engineering Department Seminar, University of Arizona,* 18 November, Tucson, AZ.
18. **Ryan, A.[†]** (2021) TRB Standing Committee on Strategic Management (AJE10) Website Research Highlights. *TRB Committee Research Coordinator (CRC) Council/Committee Research Council (CRC) Webinar on Research Activities,* 15 November, online.
17. **Ryan, A.[†]** (2021) Vehicular Design and Resource Allocation Policies for Equitable Road Safety. *Friday Transportation Seminar, Portland State University,* 12 November, online. [Link]
16. **Ryan, A.[†]** (2021) Graduate School Panel. *Professional Practice Seminar (CEE 488), University of Massachusetts Amherst,* 13 October, Amherst, MA.

15. **Ryan, A.[†]** (2021) The Academic Job Market. *Teaching Seminar (ENGIN 697T)*, University of Massachusetts Amherst, 13 & 20 October, Amherst, MA.
14. **Ryan, A.[†]** (2021) Resource allocation of local highway funds to efficiently increase safety at the local level. *Northeastern District Institute of Transportation Engineers Annual Meeting*, 13 May, online. [Link]
13. **Ryan, A.[†]** (2021) Tomorrow's mobility: New technologies, understanding users, and ensuring equity. *Chair of Transportation Systems Engineering, Technical University of Munich Doctoral Seminar*, 12 May, online.
12. **Ryan, A.[†]** (2021) ITE Women in Transportation Panel Discussion. *Institute of Transportation Engineers*, 16 April, online. [Link]
11. **Ryan, A.[†]** (2021) Drone applications for spatial visualization and data analysis. *The Digital Earth (GEOG 105)*, University of South Carolina, 31 March, online.
10. **Ryan, A.[†]** (2021) Lifelong learning & graduate school. *Professional Practice Seminar (CEE 488)*, University of Massachusetts Amherst, 1 March, online.
9. **Ryan, A.[†]** (2021) Annotating Research Articles & the UMass Library. *Concepts of Traffic Safety (CEE 497L/597L)*, University of Massachusetts Amherst, 22 February, online.
8. **Ryan, A.[†]** (2021) Gender in the Classroom: Education of the Next Generation and Conversations of Gender within Technical Topics. *Women and Gender in Transportation Mainstreaming Data Subcommittee Meeting, Transportation Research Board 100th Annual Meeting*, 11 January, online. [Link]
7. **Ryan, A.[†]** (2020) Equity of Driver Protection Design. *Introduction to Civil & Environmental Engineering (ENGIN 111)*, University of Massachusetts Amherst, 3 November, online.
6. **Ryan, A.[†]** (2020) Leveraging UAS Technology: From First Flight to Speed Data Collection. *North/West Passage Pooled Fund Study Annual Technician's Webinar*, 26 August, online. [Link]
5. **Ryan, A.[†]** (2020) Vehicle Safety. *Concepts of Traffic Safety (CEE 497L/597L)*, University of Massachusetts Amherst, 20 April, Amherst, MA.
4. **Ryan, A.[†]** (2020) Becoming an EIT. *Professional Practice Seminar (CEE 488)*, University of Massachusetts Amherst, 26 February, Amherst, MA.
3. **Ryan, A.[†]** (2020) Moving Forward: A Young Scholar's Perspective. *Insights, Inclusions, and Impact: Highlights from the 2019 Conference on Women's Issues in Transportation, Transportation Research Board 99th Annual Meeting*, 12–16 January, Washington, D.C.
2. **Ryan, A.[†]** (2019) Your Journey as a STEM Scholar: Graduate Panel. *STEM Ambassadors Program, University of Massachusetts Amherst*, 16 September, Amherst, MA.
1. **Ryan, A.[†]** (2019) Navigating Graduate School: Tips from STEM Students Panel. *Graduate Student Orientation, University of Massachusetts Amherst*, 30 August, Amherst, MA.

Conference & Annual Meeting Presentations Accepted by Abstract

74. Shen, Y.^{*†} and **Ryan, A.** (2025) Exploring the Intersection of Gender with Walking, the Built Environment, and Health Outcomes via the All of Us Dataset. Virtual podium. Accepted by full paper review. *Bridging Transportation Researchers (BTR) Conference*, 9–10 August, online.
73. Panhorst, J.^{*†} and **Ryan, A.** (2025) Unseen Risks: A Dive Into Pedestrian Fatalities and Their Disproportionate Impact. Poster. *ASCE International Conference on Transportation & Development*, 8–11 June, Glendale, AZ.
72. Zhang, X.^{*}, **Ryan, A.[†]**, and Wu, Y. (2025) Examining Nighttime Driver Compliance and Interactions at Pedestrian Hybrid Beacons. Poster. *ASCE International Conference on Transportation & Development*, 8–11 June, Glendale, AZ.

71. Ebrahimi, Z.* and **Ryan, A.**[†] (2025) A GIS-Based Approach to Analyzing Public Transit Accessibility and Service Equity with Public Data. Podium. *ASCE International Conference on Transportation & Development*, 8–11 June, Glendale, AZ.
70. Bhandari, S.*[†], **Ryan, A.**, Haule, H., and Wu, Y. (2025) Evaluating Red-Light Camera Effectiveness: A Data-Driven Study of Safety and Operational Challenges. Poster. *ASCE International Conference on Transportation & Development*, 8–11 June, Glendale, AZ.
69. Haroon, S. M.*[†], Smith, E.*, and **Ryan, A.** (2025) Optimizing Alerts in 511 Traveler Information Apps: Insights from Simulator and Eye Tracking Study. Podium. *ASCE International Conference on Transportation & Development*, 8–11 June, Glendale, AZ.
68. Haroon, S. M.*[†] and **Ryan, A.** (2025) Data Retrieval in Transportation: Retrieval-Augmented Generation with Large Language Models. Podium. *ASCE International Conference on Transportation & Development*, 8–11 June, Glendale, AZ.
67. Shen, Y.*[†] and **Ryan, A.** (2025) Exploring Walking Behavior, Access, and Health Outcomes: Insights from the All of Us Health Datasets. Poster. *ASCE International Conference on Transportation & Development*, 8–11 June, Glendale, AZ.
66. Bhandari, S.*[†], Golding, J., Waller, M. and **Ryan, A.** (2025) Assessing the Influence of Road Network Design on Wildlife-Vehicle Collisions in Urban Environments. Poster. *Arizona Institute of Engineers and International Municipal Signal Association Annual Spring Conference*, 15–17 April, Glendale, AZ.
65. Panhorst, J.*[†] and **Ryan, A.** (2025) The Role of Walkability in Affordable Housing Access Across Major U.S. Cities. Poster. *Arizona Institute of Engineers and International Municipal Signal Association Annual Spring Conference*, 15–17 April, Glendale, AZ.
64. Haroon, S. M.*[†], **Ryan, A.**, Duvvuri, S.[†], and Lang, M.[†] (2025) What is the Best Content and Alert Style for the AZ511 App? Results from a Driving Simulator and Eye-tracking Study. Podium. *Arizona Institute of Engineers and International Municipal Signal Association Annual Spring Conference*, 15–17 April, Glendale, AZ.
63. Haroon, S. M.*[†], Smith, E.*, and **Ryan, A.** (2025) Optimizing Alert Systems for Traveler Information Apps: A Study on Alert Impact on Driver Response to Road Incidents. Podium. *2025 Safe Mobility Conference*, 7–9 April, Madison, WI.
62. Haroon, S. M.*[†] and **Ryan, A.** (2025) Enhancing Transportation Safety Data Query and Management through Retrieval-Augmented Generation in Large Language Models. Poster. *2025 Safe Mobility Conference*, 7–9 April, Madison, WI.
61. Haroon, S. M.*, Panhorst, J.*[†] and **Ryan, A.** (2025) Sex-Based Differences in Vehicle Seating Position and Safety Outcomes. Poster. *2025 Public Health Poster Forum*, 4 April, Tucson, AZ.
60. **Ryan, A.**[†] (2025) Rethinking Occupant Protection Through a Gender and Sex Lens. Workshop/Panel Presentation. *Lifesavers Conference on Road Safety*, 9–11 March, Long Beach, CA.
59. Panhorst, J.*[†] and **Ryan, A.** (2025) Exploring Disparities in Pedestrian Fatalities: Understanding Demographic Factors through a Public Health Lens. Poster. *36th Annual Undergraduate Biology Research Program Conference, University of Arizona*, 25 January, Tucson, AZ.
58. **Ryan, A.**[†] (2025) Improving Vehicle Safety Standards for All: An Investigation into Sex-Based Injury Risks and Seating Patterns. Podium. *2025 Discussions Advancing Research in Transportation Safety (DARTS) Meeting*, 9–11 January, Washington, DC/online hybrid.
57. Bhandari, S.*[†] and **Ryan, A.** (2024) Navigating the Road to Safety: The Role of Automated Enforcement in Metro Phoenix Region. Poster. *9th Road Safety & Simulation International Conference*, 28–31 October, Lexington, KY.

56. Haroon, S. M.*† and **Ryan, A.** (2024) Unlocking Insights into Driver Inattention: A Comprehensive Analysis of Factors and Trends through Statistical and Big Data Analysis. Podium. *9th Road Safety & Simulation International Conference*, 28–31 October, Lexington, KY.
55. **Ryan, A.†** (2024) Securing Safe Journeys: Enhancing Transportation Safety through a Gender Lens. Workshop. *7th International Conference on Women and Gender in Transportation*, 9–11 September, Irvine, CA.
54. **Ryan, A.** and Nasrin, S.*† (2024) Understanding the gender-based differences regards the perception towards the comfort and safety of drivers' seat. Podium. *7th International Conference on Women and Gender in Transportation*, 9–11 September, Irvine, CA.
53. Bhandari, S.*† and **Ryan, A.** (2024) Bridging the gap: A comprehensive global analysis of gender equity in transportation. Poster. *7th International Conference on Women and Gender in Transportation*, 9–11 September, Irvine, CA.
52. Haroon, S. M.*† and **Ryan, A.** (2024) Exploring Gender Disparities in Bicycling Usage Patterns: Socioeconomic Intersections and Post-COVID Trends. Podium. *7th International Conference on Women and Gender in Transportation*, 9–11 September, Irvine, CA.
51. Bhandari, S.* and **Ryan, A.†**. (2024) Navigating Safety through the Gender Lens: A Comprehensive Review of Gender Equity in Transportation. Poster. *Institute of Transportation Engineers Annual Meeting*, 21–24 July, Philadelphia, PA.
50. Bhandari, S.*†, Cottam, A., **Ryan, A.**, and Wu, Y. Enhancing Traffic Management and Road Safety through Data Integration. Poster. *ASCE International Conference on Transportation & Development*, 15–18 June, Atlanta, GA.
49. Haroon, S. M.*† and **Ryan, A.** Understanding the Causes of Inattention-Related Fatal Crashes: A Comprehensive Analysis. Poster. *ASCE International Conference on Transportation & Development*, 15–18 June, Atlanta, GA.
48. Haroon, S. M.*†, De Luna Gutierrez, C.*, Bhandari, S.*, **Ryan, A.**, and Haule, H. Comprehensive Analysis of Red-Light Running in the US: Strategies, Successes, and Future Directions. Poster. *ASCE International Conference on Transportation & Development*, 15–18 June, Atlanta, GA.
47. Whitmore, A.†, Corcoran, H.†, and **Ryan, A.†**. Defining and Addressing Transportation Equity with New Technologies. Panel. *ITS America Conference & Expo*, 22–24 April, Phoenix, AZ.
45. Haroon, S. M.† and **Ryan, A.** (2023) Pros and cons of using Explainable AI in machine learning-based crash prediction models. Podium. *International Roads Federation Global Road to Tomorrow Conference & Exhibition*, 14–17 November, Phoenix, AZ.
44. Bhandari, S.† and **Ryan, A.** (2023) Designing for vulnerable road users: A case for gender equity in transportation. Podium. *International Roads Federation Global Road to Tomorrow Conference & Exhibition*, 14–17 November, Phoenix, AZ.
43. Wu, Y.†, **Ryan, A.†**, and Shamshiripour, A.† (2023) Advancements in Transportation Systems: The Role of Applied Research in Arizona. Podium. *Arizona Conference on Roads & Streets*, 1–3 November, Tucson, AZ.
42. Bhandari, S.*† and **Ryan, A.** (2023) Designing for vulnerable road users: A case for gender equity in transportation. Podium. *Mountain District Institute for Transportation Engineers Student Leadership Summit*, 12–14 October, Provo, UT.
41. Zhang, X.*†, Wu, Y., and **Ryan, A.** (2023) Unraveling Factors Impacting Pedestrian and Bicycle Crashes at HAWKS. Podium. *ITS Arizona Annual Conference*, 20–21 September, Mesa, AZ.

40. Haroon, S. M.*† and **Ryan, A.** (2023) A new way to interpret safety model results: Exploring the benefits and limitations of applying SHAP. Podium. *ITS Arizona Annual Conference*, 20–21 September, Mesa, AZ.
39. Zhang, L.†, Haroon, S. M.*, and **Ryan, A.** (2023) Py-CoSim: An Open-Source Python-EMS-Based Energyplus Co-Simulation Platform. Podium. *2023 ASHRAE Building Performance Analysis Conference*, 11–13 September, Austin, TX.
38. Pan, M.*†, Isham, E., and **Ryan, A.** (2023) Changing mode choice through action: A framework for a small participation pool. Virtual podium. Accepted by full paper review. *Bridging Transportation Researchers (BTR) Conference*, 9–10 August, online.
37. Pan, M.*†, Wong, S., Tainter, S., Woelfel, S., and **Ryan, A.** (2023) Equity in Transportation Scenario Planning: Review, Trends, and Future Needs. Virtual podium. Accepted by full paper review. *Bridging Transportation Researchers (BTR) Conference*, 9–10 August, online.
36. Haroon, S. M.*† and **Ryan, A.** (2023) The evolution of bicycling as a means of transportation in the United States: Key insights through an equity lens. Virtual podium. *International Professional Association for Transport & Health Annual Meeting 1-Day Conference Series*, 29 June, online.
35. Haroon, S. M.*† and **Ryan, A.** (2023) How do crashes of fully autonomous vehicles compare with non-autonomous vehicles in current mixed fleet conditions? An investigation using a novel dataset in California. Poster. *ASCE International Conference on Transportation & Development*, 14–17 June, Austin, TX.
34. Bhandari, S.*† and **Ryan, A.** (2023) How do we measure equity in transportation projects? Identified practices and recommendations. Podium. *ASCE International Conference on Transportation & Development*, 14–17 June, Austin, TX.
33. Pan, M.* and **Ryan, A.†** (2023) Investigating the dynamic impact of the influencing factors on mode choice: A field application of transit use in Southern Arizona. Poster. *ASCE International Conference on Transportation & Development*, 14–17 June, Austin, TX.
32. **Ryan, A.†** (2023) “Roadway Safety: The Role of Gender in Design,” Gender and Experiences of Personal Safety in Transportation. Podium and Panel. *Transportation Research Forum*, 27–28 April, Chicago, IL.
31. Bhandari, S.*† and **Ryan, A.** (2023) Assessment of gender equity practices in transportation. Podium. *ITS Arizona Student Transportation Summit*, 7 April, online.
30. Raha, F.*†, Russo, B., and **Ryan, A.** (2023) Investigating the Impact of the COVID-19 Pandemic on Traffic Crash Injury Outcomes among Different Demographic Groups. Podium. *Pacific Southwest Regional University Transportation Center Annual Congress*, 17–18 March, Los Angeles, CA.
29. **Ryan, A.†** (2023) Developing and Launching a Research Statement Plan for AJE10: Successes and Challenges. Lightning Talk. *Transportation Research Board 102nd Annual Meeting*, 8–12 January, Washington, D.C. Accepted by the TRB Committee Research Coordinating Council.
28. Bhandari, S.*†, Pan, M.*†, and **Ryan, A.** (2023) Measuring gender equity: Best practices identified in current literature. Poster. *Transportation Research Board 102nd Annual Meeting*, 8–12 January, Washington, D.C. Accepted by the TRB Women and Gender in Transportation Committee.
27. Pan, M.*† and **Ryan, A.†** (2023) Current Practices in Scenario Planning: What Works in Transportation and Adjacent Sectors. Poster. *Transportation Research Board 102nd Annual Meeting*, 8–12 January, Washington, D.C. Accepted by the TRB Strategic Management Committee.
26. Pan, M.*† and **Ryan, A.†** (2022) Cutting Edge in Equity: Developing Equitable Practices in Transportation Engineering and Design. Podium. *Arizona Conference on Roads & Streets*, 28–30 September.
25. Pan, M.*† and **Ryan, A.** (2022) The Impact of Confirmation Bias on Perceived Health Risk of Using Public Transit: An Evaluation during the Pandemic. Podium. *International Conference on Transport and Health*, 27–28 June [Link].

24. **Pan, M.*†** and **Ryan, A.** (2022) Identifying the target audience: Exploring the characteristics of nudgeable people towards sustainable behavior change. Poster. *ASCE International Conference on Transportation & Development*, 31 May–2 June.
23. Hennessy, E.†, **Ryan, A.†**, Knodler, M., Fitzpatrick, C., and Ai, C. (2022) Safety Analyses Using a Novel Horizontal Curve Dataset: An Application in Massachusetts. Podium. *Institute of Transportation Engineers Tech Conference*, 15–16 March, online.
22. **Ryan, A.†**, Zeng, J., Knodler, M., and Woelfel, S. (2022) Best Practices of Knowledge Management for State DOTs: Developing Actionable Objectives for a State DOT. Poster. *Transportation Research Board 101st Annual Meeting*, 8–14 January, Washington, D.C. Accepted by the TRB Strategic Management Committee.
21. Leingang, T.† and **Ryan, A.†** (2021) Innovative Uses of UAV Technology. Demonstration/Podium. *16th Annual Western States Rural Transportation Technology Implementers Forum*, 5–7 October, Yreka, CA.
20. **Ryan, A.†**, Ai, C., Fitzpatrick, C., and Knodler, M. (2021) Development and application of a large-scale geospatial analysis tool for informed safety investment. Podium. *European Transport Conference*, 9–15 September, online format.
19. **Ryan, A.†**, Christofa, E., Barchers, C., and Knodler, M. (2021) Towards equitable road safety: Socio-demographic divides in municipal highway investments. *Conference on Advancing Transportation Equity*, 7–9 September, online format.
18. Higgins, N.† and **Ryan, A.†** (2021) War Games: Refining the Research Statements. *Conference on Advancing Transportation Equity*, 7–9 September, online format.
17. **Ryan, A.†**, Ai, C., Fitzpatrick, C., and Knodler, M. (2021) Identifying safety-critical road segments and potential countermeasures: A geospatial approach using horizontal curve data. Poster. *Institute of Transportation Engineers Annual Meeting*, 20–29 July, online format.
16. **Ryan, A.†**, Ai, C., Fitzpatrick, C., and Knodler, M. (2021) Improving local road safety through informed resource allocation: Evidence from a data envelopment analysis. Podium. *ASCE International Conference on Transportation & Development*, 8–10 June, online format.
15. **Ryan, A.†**, Hennessy, E., Fitzpatrick, C., Knodler, M., and Ai, C. (2021) Driver performance at horizontal curves: A review of current simulation literature and research gaps. Poster. *Safety Research Using Simulation (SAFER-SIM) Conference*, 11–12 & 18–19 March, online format.
14. **Ryan, A.†**, Tainter, F., Fitzpatrick, C., Gazzillo, J., Riessman, R., and Knodler, M. (2020) Inclusive roadway infrastructure design: The impact of sex on crash injury outcomes by roadway environment type. Podium. *European Transport Conference*, 9–11 September, online format.
13. **Ryan, A.†**, Tainter, F., Fitzpatrick, C., Riessman, R., Gazzillo, J., and Knodler, M. (2020) Inclusive roadway designs: The impact of sex on crash injury outcomes due to roadway infrastructure. Poster. *ASCE International Conference on Transportation & Development*, 26–29 May, Seattle, WA. (Event canceled due to COVID-19)
12. **Ryan, A.†** and Page, M.† (2020) Optimizing the Deployment of Enforcement Resources: A Geospatial Approach using Crash and Citation Data. Podium. *Northeastern District Institute of Transportation Engineers Annual Meeting*, 13–15 May, Long Island, NY. (Event canceled due to COVID-19)
11. **Ryan, A.†**, Tainter, F., Fitzpatrick, C., Gazzillo, J., Riessman, R., and Knodler, M. (2020) The Impact of Driver Sex on Injury Outcomes Associated with Motor Vehicle Crashes. Poster. *Transportation Research Board 99th Annual Meeting*, 12–16 January, Washington, D.C. Accepted by the Dwight D. Eisenhower Fellowship Committee.

10. **Ryan, A.[†]**, Fitzpatrick, C., Ai, C., and Knodler, M. (2019) Using Drones to Collect Speed Data: A Novel Approach. Podium. *Institute of Transportation Engineers Annual Meeting*, 21–24 July, Austin, TX.
9. **Ryan, A.[†]**, Fitzpatrick, C., and Knodler, M. (2019) Driver Behavior Due to Unmanned Aerial Vehicle Height: A Driver Simulator Study. Podium. *ASCE International Conference on Transportation & Development*, 9–12 June, Alexandria, VA.
8. Ramanathan Parthasarathy, A.[†], Bakhtiari, S., Knodler, M., **Ryan, A.**, and Tainter, F. (2019) Study on Driver Behavior and Performances on Augmented Reality Display Based Speed Compliance. Poster. *ASCE International Conference on Transportation & Development*, 9–12 June, Alexandria, VA.
7. **Ryan, A.[†]** and Casola, E.[†] (2019) Flashing Yellow Arrow for Right Turn Maneuvers - An Evaluation of Driver Behavior. Podium. *Northeastern District Institute of Transportation Engineers Annual Meeting*, 8–10 May, New Haven, CT.
6. **Ryan, A.[†]**, Fitzpatrick, C., Christofa, E., and Knodler, M. (2019) Driver Distraction Due to Drones. Poster. *Northeastern District Institute of Transportation Engineers Annual Meeting*, 8–10 May, New Haven, CT.
5. **Ryan, A.[†]**, Fitzpatrick, C., Christofa, E., and Knodler, M. (2019) Driver Distraction due to Drones in the Vicinity of Roadways. Podium. *New England ITS Annual Interchange*, 25 April, Manchester, NH.
4. **Ryan, A.[†]**, Bouchard, C., Fitzpatrick, C., Knodler, M., and Ahmadjian, C. (2019) An Analytical Comparison of Core Competencies Across Civil Engineering Positions within New England Department of Transportation Agencies. Poster. *Massachusetts Department of Transportation Innovation Conference*, 9–10 April, Worcester, MA.
3. **Ryan, A.[†]**, Tainter, F., Fitzpatrick, C., Page, M., Christofa, E., and Knodler, M. (2018) Alternative Merge Design Downstream of Intersections. Poster. *Institute of Transportation Engineers Annual Meeting*, 20–23 August, Minneapolis, MN.
2. **Ryan, A.[†]**, Tainter, F., Fitzpatrick, C., Page, M., Christofa, E., and Knodler, M. (2018) Alternative Merge Design Downstream of Intersections. Podium. *Connecticut Chapter and New England Section Joint Institute of Transportation Engineers Meeting*, 26 March, Hartford, CT.
1. Tainter, F., **Ryan, A.[†]**, Fitzpatrick, C., Page, M., Christofa, E., and Knodler, M. (2018) Evaluation of Downstream Merge Behaviors Resulting From Driver Lane Choice: A Driving Simulator Study. Poster. *Safety Research Using Simulation (SAFER-SIM) Conference*, 4–6 February, Orlando, FL.

Project-Funded Webinars

2. Khani, A. and **Ryan, A.** (2025) Transitioning to EV Fleets: Best Practices and a Decision Tool. *Minnesota Local Road Research Board*, 12 August.
1. **Ryan, A.** (2020) The Influence of Unmanned Aerial Systems on Driving Performance. *Safety Research Using Simulation (SAFER-SIM)*, 21 July. [Link]

Internal Seminars

21. Haroon, S. M.^{*†} and **Ryan, A.** (2025) AZ511 App: Identifying Effective Alert Systems to Enhance Driver Response. Podium. *Center for Applied Transportation Sciences (CATS) Seminar, University of Arizona*, 19 March, Tucson, AZ.
20. Shen, Y.^{*†} and **Ryan, A.** (2025) Integrating EV Charging with Building Energy Systems: Modeling the Future of Behavior. Podium. *Center for Applied Transportation Sciences (CATS) Seminar, University of Arizona*, 5 March, Tucson, AZ.
19. Bhandari, S.^{*†}, **Ryan, A.**, Haule, H., and Wu, Y. (2025) Evaluating the Safety Impact of Red-Light Cameras in the City of Phoenix. Podium. *Center for Applied Transportation Sciences (CATS) Seminar, University of Arizona*, 17 January, Tucson, AZ.

18. **Ryan, A.[†]** (2024) Evaluation of LED Sequential Flashing Chevron along Golf Links Road. Podium. *Center for Applied Transportation Sciences (CATS) Seminar, University of Arizona*, 4 December, Tucson, AZ.
17. **Haroon, S. M.^{*†}** and **Ryan, A.** (2024) Evaluating Phone Alerts: A review of mobile app alert system use while driving. Podium. *Center for Applied Transportation Sciences (CATS) Seminar, University of Arizona*, 9 October, Tucson, AZ.
16. **Panhorst, J.^{*†}** and **Ryan, A.** (2024) Investigating Implications of Transportation Inequities to Public Health Using Crash Data. Podium. *Place-based Health Informatics Research Education Program (PHIRE) Retreat, University of Arizona*, 7 August, Tucson, AZ.
15. **Bhandari, S.^{*†}** and **Ryan, A.** (2024) Assessing gender equity in developing and developed nations. Podium. *Center for Applied Transportation Sciences (CATS) Seminar, University of Arizona*, 21 February, Tucson, AZ.
14. **Haroon, S. M.^{*†}** and **Ryan, A.** (2023) Nighttime Crashes in Arizona: Understanding Trends, Risks, and Factors. Podium. *Center for Applied Transportation Sciences (CATS) Seminar, University of Arizona*, 7 February, Tucson, AZ.
13. **Bhandari, S.^{*†}**, **Cottam, A.**, **Ryan, A.**, and **Wu, Y.** (2023) A methodological approach to enhancing traffic management and road safety through integration of crash data and real-time speed data. Podium. *Center for Applied Transportation Sciences (CATS) Seminar, University of Arizona*, 1 November, Tucson, AZ.
12. **Bhandari, S.^{*†}**, **Cottam, A.**, **Ryan, A.**, and **Wu, Y.** (2023) Arizona crash information system. Podium. *Center for Applied Transportation Sciences (CATS) Seminar, University of Arizona*, 26 April, Tucson, AZ.
11. **Haroon, S. M.^{*†}** and **Ryan, A.** (2023) Transportation safety and eyetracking: Evaluating the potential of eyetracking to improve transportation safety. Podium. *Center for Applied Transportation Sciences (CATS) Seminar, University of Arizona*, 29 March, Tucson, AZ.
10. **Haroon, S. M.^{*†}** and **Ryan, A.** (2022) Comparing Crashes Involving Automated and Non-Autonomous Vehicles in Current Mixed Fleet Conditions. Podium. *Center for Applied Transportation Sciences (CATS) Seminar, University of Arizona*, 2 November, Tucson, AZ.
9. **Bhandari, S.^{*†}** and **Ryan, A.** (2022) How do we measure equity in transportation projects? Identified practices and recommendations. Podium. *Center for Applied Transportation Sciences (CATS) Seminar, University of Arizona*, 2 November, Tucson, AZ.
8. **Pan, M.^{*†}** and **Ryan, A.** (2022) Persona Generation For Travel Demand Management Program. Podium. *Center for Applied Transportation Sciences (CATS) Seminar, University of Arizona*, 26 April, Tucson, AZ.
7. **Ryan, A.[†]** (2021) Unmanned Aerial Vehicles: Applications in Transportation and Driver Behavior Considerations. *Center for Applied Transportation Sciences (CATS) and the Department of Civil & Architectural Engineering & Mechanics Combined Seminar, University of Arizona*, 19 November, Tucson, AZ.
6. **Pan, M.^{*†}** and **Ryan, A.** (2021) Habit Formation Behavior Framework for Active Transportation Demand Management. *Center for Applied Transportation Sciences (CATS) Seminar, University of Arizona*, 26 October, Tucson, AZ.
5. **Ryan, A.[†]** (2020) Leveraging Drone Technology as Transportation Professionals. *Transportation Seminar Series (CEE 695A), University of Massachusetts Amherst*, 3 September, online.
4. **Ryan, A.[†]** (2020) Developing a Competitive CV for Graduate Students. *University of Massachusetts Amherst Engineering Career Center*, 10 August.
3. **Ryan, A.[†]** (2020) Developing a Competitive Resume for Graduate Students. *University of Massachusetts Amherst Engineering Career Center*, 22 July.

2. **Ryan, A.[†]** (2020) Building Your Online Presence Through LinkedIn: Graduate Student Edition. *University of Massachusetts Amherst Engineering Career Center*, 29 April.
1. **Ryan, A.[†]** (2020) Developing a Competitive Resume for Graduate Students. *University of Massachusetts Amherst Engineering Career Center*, 29 April.

MENTORING

Doctoral Students

- 2024–PRESENT Yuxi Shen
2025 Katie Dusenberry Scholarship, Women’s Transportation Seminar Tucson Chapter
- 2022–PRESENT Sushmita Bhandari, *“Automated Enforcement and Traffic Safety: Evaluating Public Sentiment, Crash Outcomes, and Equity in Red-Light Camera Use”*
2025 Spring Graduate and Professional Student Council Research and Project Grant
2024 Travel Award, TRB Women and Gender in Transportation Conference
1st Place, Student Presentation Competition, ITS America 2024 Conference and Expo
National Institute for Transportation and Communities Travel Support Awards
2022 Katie Dusenberry Scholarship, Women’s Transportation Seminar Tucson Chapter
- PH.D., 2025 Saquib Mohammed Haroon, *“Integrating Behavioral and Equity Factors to Enhance Transportation Safety”*
Associate Researcher, AAA Foundation for Traffic Safety, Washington, DC
2024 Travel Award, TRB Women and Gender in Transportation Conference
2023 Traffic Safety Scholar, Lifesavers Conference
National Institute for Transportation and Communities Travel Support Awards
Engineering Dean’s Fellowship, College of Engineering, UArizona
- PH.D., 2022 Melrose (Meiyu) Pan, *“Behavior Science Methods for Active Transportation Demand Management”*
Research and Development Associate, Transportation Analytics & Decision Sciences Group, Oak Ridge National Laboratory, Knoxville, TN
2022 National Institute for Transportation and Communities PhD Student of the Year
Graduate and Professional Student Council Travel Grant, University of Arizona
National Institute for Transportation and Communities Travel Support Awards (x3)

Master of Engineering Students

- M.E., 2023 Bailey Homan, Civil Engineering
EIT Analyst at Jacobs, Tucson, AZ

Postdoctoral Associates

- 2024 Zhila Dehdari Ebrahimi, Ph.D.
Transportation Planning Specialist, Washington DOT, Seattle, WA

Undergraduate Researcher Students

- 2024–2025 Isabel Rei Zann Wee, Industrial Engineering
2024–2025 Ryan Cassity, Civil Engineering
2024–2025 Juliana Panhorst, Public Health
2025 Global Health Institute Scholar
2024 National Institute for Transportation and Communities Travel Support Award
- 2024 Elizabeth Smith, Psychology
2024 National Institute for Transportation and Communities Travel Support Award
- 2024 Luis Henrique Santos Olive Ferreira, Undeclared
2023–2024 Chanh Cong, Math
2023 Camillah Shoo, Public Health
2023 Joann Chang, Industrial Engineering
2023 National Institute for Transportation and Communities Scholar Award
- 2023–2024 Cipriano De Luna Gutierrez, Civil Engineering

- 2024 Transportation Research Board Minority Student Fellow
 2023 National Institute for Transportation and Communities Scholar Award
 2023 Abigail Denninghoff, Architecture
 2022 Michaelyn Moses, Industrial Engineering
 2022 Ying-Tung Chou, Business Administration and Psychology

Committee Member

Doctoral Students

- 2025 Pouya Jalali Khalilabadi, Civil Engineering
 2024–2025 Xi Zhang, Civil Engineering
 2024–2025 Pramesh Pudasaini, Civil Engineering
 2022–2023 Zirui (Raymond) Huang, Civil Engineering
 2022–2023 Adrian Cottam, Civil Engineering
 2021–2022 Xiaobo Ma, Civil Engineering

MS Students

- 2025 Sunil Khadka, Civil Engineering

TEACHING EXPERIENCE

University of Arizona

- FALL 2024 Transport Engineering and Pavement Design (CE 363)
 4 credits, one section, in person, 46 students
- FALL 2024 Statistical Methods in Transportation Engineering (CE 461A/561A)
 3 credits, combined undergraduate and graduate section, in person, 8 students
- FALL 2024 Graduate Student Seminar for Civil & Architectural Engineering & Mechanics (CE 596A)
 1 credit, one section, in person, 26 students
- FALL 2024 Directed Research (Independent Study) (PSYS 392)
 3 credits, one section, 1 student
- FALL 2023 Traffic Safety (CE 467/567)
 3 credits, combined undergraduate and graduate section, in person, 7 students
 INSTRUCTOR EVALUATION: 4.8/5.0
- FALL 2022 Statistical Methods in Transportation Engineering (CE 461A/561A)
 3 credits, combined undergraduate and graduate section, in person, 8 students
 INSTRUCTOR EVALUATION: 4.9/5.0
- SPRING 2022 Traffic Safety (CE 467/567)
 3 credits, combined undergraduate and graduate section, 15 students in person, 6 students
 online at the American University of Phnom Penh, Cambodia
 INSTRUCTOR EVALUATION: 4.7/5.0

University of Massachusetts Amherst

- FALL 2019 Engineering First Year Seminar (ENGIN 191)
 1 credit, three sections, in person, 54 students total
 INSTRUCTOR EVALUATION: 4.8/5.0 (SEC. 9); 4.8/5.0 (SEC. 11); 4.7/5.0 (SEC. 31)
- FALL 2018/19 Power Up College Success (UNIVRSTY 191A)
 1 credit, one section, in person, ≈ 24 students each year

SERVICE

Journal Referee Work

- 2025–PRESENT Journal of Transportation Safety & Security
 2025–PRESENT Transport Reviews
 2024–PRESENT Findings

2024–PRESENT Transport Policy
 2023–PRESENT Transportation Research Part D: Transport & Environment
 2023–PRESENT Journal of Transportation Engineering, Part A: Systems
 2022–PRESENT Safety Science
 2022–PRESENT Journal of Advanced Transportation
 2022–PRESENT Accident Analysis & Prevention
 2022–PRESENT Transportation Research Record
 2021–PRESENT Institute of Transportation Engineers Journal
 2021–PRESENT Transportation Research Interdisciplinary Perspectives
 2020–PRESENT Electronic Letters
 2020–PRESENT IET Intelligent Transportation Systems
 2020–2025 Traffic Injury Prevention

Conference Referee Work

2025 Safe Mobility Conference
 2025 American Society of Civil Engineers International Conference on Transportation & Development
 2024–PRESENT Annual Meeting of the Human Factors and Ergonomics Society (HFES), ASPIRE
 2024 7th International Conference on Women and Gender in Transportation (WGIT) Abstract Review
 2023 2024 Transportation Research Board Doctoral Student Workshop Abstract Review
 2023 Bridging Transport Researchers Conference (BTR5)
 2023 67th International Human Factors and Ergonomics Society Annual Meeting
 2022 SAE World Congress
 2022 66th International Human Factors and Ergonomics Society Annual Meeting
 2021–PRESENT Institute of Transportation Engineers International Meeting
 2021 Conference on Advancing Transportation Equity
 2021 International IEEE Conference on Models and Technologies for ITS
 2019–PRESENT Transportation Research Board Annual Meeting
 2019–PRESENT Road Safety & Simulation International Conference
 2019 European Transport Conference
 2019 ITS America Annual Meeting

Award Referee Work

2023 Institute of Transportation Engineers 2023 Dan Fambro Student Research Paper Awards
 2022 Institute of Transportation Engineers Transportation Education Council Innovation in Education Award

Other Referee Work

2025 Human Factors and Ergonomics Society Diversity, Equity, and Inclusion Seed Grants
 2023–PRESENT New England University Transportation Center Proposals

Conference and Event Leadership

2025 Invited Session Moderator, “Session 5: Gender, Age, & Vulnerable Travelers,” 6–7 August, Bridging Transportation Researchers (BTR) Conference, online
 2025–PRESENT Co-Chair, Conference Poster Committee, AAA Foundation for Traffic Safety’s 2026 Safe Mobility Conference, Seattle, WA
 2025 Moderator (Invited), “Innovative Approaches for Safe Mobility,” 2025 Safe Mobility Conference, 7–9 April, Madison, WI.
 2025 Lead Organizer, “Transportation for All: Perspectives from Local Transportation Agencies,” 26 March, ITE Spring Conference, online
 2025 Lead Organizer, “Integrating Safety into University Engineering Programs,” 25 March, ITE Spring Conference, online

- 2024–2025 Co-Chair, Conference Sponsorship Committee, AAA Foundation for Traffic Safety’s 2025 Safe Mobility Conference, Madison, WI
- 2024 Facilitator & Organizer, “Empowering the Future - Gender Equity and AI in Transportation,” 9-11 September, 7th International Conference on Women and Gender in Transportation, Irvine, CA
- 2024 Moderator and & Lead Organizer, “Gender-Inclusive Transportation Safety,” 2 October, Transportation Research Board, Standing Technical Committees on Women and Gender in Transportation and Transportation Safety Management Systems webinar, online, 215 attendees [Link]
- 2024 Organizing Member and Facilitator, “ITE Diversity & Inclusion Affinity Groups: Who, What, Why, and How,” 21–24 July, Institute of Transportation Engineers Annual Meeting, Philadelphia, PA
- 2024 Moderator, “Closing Plenary: Walking the Talk on Future World Vision,” 15–18 June, American Society of Transportation Engineers International Conference on Transportation & Development, Atlanta, GA
- 2024 Moderator, “Movie Viewing: Cities of the Future (ASCE’s 45-minute documentary),” 15–18 June, American Society of Transportation Engineers International Conference on Transportation & Development, Atlanta, GA
- 2024 Moderator, “Navigating Gender Dynamics in Ride-hailing: Perspectives from Academia and Industry,” 29 March, Panel at the Transportation Research Board Women and Gender in Transportation Standing Committee (AME20) Meeting, online
- 2024 Moderator, “Using LinkedIn Effectively: Methods and Experiences for Young Professionals,” 27 March, American Society of Civil Engineers Transportation & Development Institute Younger Member Committee Webinar, online
- 2024 Moderator & Lead Organizer, “AI in Transportation Education,” 7 March, Institute of Transportation Engineers, online webinar
- 2024 Organizer & Tabletop Discussion Lead, “Highway to Artificial Intelligence: Future-Proofing the Transport Sector Workshop,” Transportation Research Board 103th Annual Meeting, 7–11 January, Washington, D.C.
- 2024 Moderator & Event Lead, “Shaping the Agency of the Future: Adapting with Workforce, Technology, and Funding Challenges,” Transportation Research Board 103th Annual Meeting, 7–11 January, Washington, D.C.
- 2023 Scientific Review Committee Member, 9th Road Safety & Simulation International Conference
- 2023 Moderator & Lead Organizer, “Student Chapter Mega-Events: Best Practices and Lessons Learned,” 17 October, Institute of Transportation Engineers, online webinar
- 2023 Panelist & Organizer, “A Conversation on Gender Safety: The Intersection of Physical Safety and Personal Security,” 6 September, Transportation Research Board Women & Gender in Transportation Standing Committee Midyear Meeting, online
- 2023 Invited Session Moderator, “Equity and Accessibility in Transportation,” 9–10 August, Bridging Transportation Researchers (BTR) Conference, online
- 2023 Invited Conversation Guide/Leader, “Young Professional’s Career Survival Guide,” 12–16 August, Institute of Transportation Engineers Annual Meeting, Portland, OR
- 2023 Panelist & Organizing Member, “Inclusion at ITE Events Workshop,” 12–16 August, Institute of Transportation Engineers Annual Meeting, Portland, OR
- 2023 Research Committee Member, International Conference ITS2023: Intelligent Systems & Consciousness Society
- 2023 Moderator & Lead Organizer, “Equity and Engagement: Conversations in Transportation Education,” 20 April, Institute of Transportation Engineers, online webinar
- 2023 Moderator & Lead Organizer, “Student Chapter K12 Outreach Activities: Best Practices for Active Engagement,” 2 March, Institute of Transportation Engineers, online webinar
- 2022 Presiding Officer (Invited), “Gender and Non-Auto-Oriented Travel,” 9 January, Transportation Research Board Annual Meeting, Washington, D.C.

- 2022 Moderator & Organizer (Invited), "Urban Roadway Design: Time for a New Paradigm?," 8 January, Standing Committee on Human Factors of Infrastructure Design and Operations (ACH40), Transportation Research Board Annual Meeting, Washington, D.C.
- 2022 Moderator & Lead Organizer, "New Practices in Undergraduate Transportation Education," 9 November, Institute of Transportation Engineers, online webinar
- 2022 Moderator & Lead Organizer, "Increasing Diversity of Fields in Student Chapter Engagement," 26 October, Institute of Transportation Engineers, online webinar
- 2022 Moderator, "Operations," 18–19 October, 2022 ITS Arizona Annual Conference, Phoenix, AZ
- 2022 Moderator, "Scenario Planning at State DOTs," 19–21 September, Transportation Research Board Scenario Planning Conference, Washington, D.C.
- 2022 Session Chair (Invited), "Naturalistic Driving," 8–10 June, Road Safety & Simulation International Conference, Athens, Greece
- 2022 Moderator, "Multimodal Transportation," 17–19 May, Arizona Institute of Engineers and International Municipal Signal Association Annual Spring Conference, Phoenix, AZ
- 2021 Moderator & Lead Organizer, "Bicycle infrastructure and gendered safety perceptions - A Feminist exploration," 11 November, Transportation Research Board Women and Gender in Transportation Standing Committee Webinar Series
- 2021 Session Moderator, Lightning Talks: Safety and Recreational Travel, Conference on Advancing Transportation Equity, 9–10, 13–14 September, online
- 2021 Session Moderator, Panel Discussion: Graduating into Success - How to Develop Meaningful Partnerships with HBCUs and MSIs, Conference on Advancing Transportation Equity, 9–10, 13–14 September, online
- 2021–2022 Committee Member and Reviewer Lead, 2022 Transportation Research Board Scenario Planning Conference
- 2021 Moderator & Lead Organizer, "A VISION - By 2030: Occupant safety performances of new cars are assessed for both women and men," 14 April, Transportation Research Board Women and Gender in Transportation Standing Committee Webinar Series, online
- 2021 Co-Host, "ITE Student Conversations," 11 March, ITE Education Council, online
- 2021 Moderator & Lead Organizer, "Navigating Post-Grad Life: Public vs. Private Jobs, Deciding if a Masters Degree is for you, and more," 11 February, UMass Amherst WTS & ITE Student Chapters, Amherst, MA
- 2021 Subcommittee on Mentoring and Student Engagement, Conference on Advancing Transportation Equity (CATE) Planning Team
- 2021 Facilitator, Equity Focus Group, War Games, Transportation Research Board Annual Meeting, Washington, D.C.
- 2020 Moderator & Planning Team Member, "Virtual Career Roundtable: Navigating the Industry during a Pandemic," 27 August, UMass Amherst WTS-Boston Student Chapter, Amherst, MA
- 2019 Planning Committee, Tech Day: An ASCE & ITE Showcase, 5 November, Amherst, MA
- 2019 Session Moderator, Commercial Vehicle Safety Summit, 19–20 November, Northampton, MA
- 2018, 2019 Exhibitor Assistance, MassDOT Moving Together Conference, Worcester, MA
- 2018, 2019 Exhibitor Assistance, MassDOT Transportation Innovation Conference, Boston, MA
- 2017–2018 Co-Chair, Inaugural Northeastern/Mid-Colonial ITE Student Leadership Summit, 12–14 April, Amherst, MA

Professional Membership and Leadership

Arizona Transportation Institute

- 2024–2025 Program Advisory Committee Faculty Representative for Operations

Department of Energy

- 2024 Reviewer for Bipartisan Infrastructure Law (BIL) Battery Materials Processing and Battery Manufacturing Grants DE-FOA-0003099

National Science Foundation

- 2025 Reviewer, Division of Computer and Network Systems
- 2022 Reviewer, Graduate Research Fellowship Program

Transportation Research Board

Committee on Women and Families (AQC11)

2025–PRESENT Member

Committee on Road User Measurement and Evaluation (ACH50)

2025 Member (Ended due to restructure of TRB Committees)

Committee on Women and Gender in Transportation (AME20)

2025 Secretary (Moved to Secretary due to policy change at TRB; Ended in 2025 due to restructure of TRB Committees)

2024–2025 Vice Chair

2021–2023 Communications Coordinator

2021–2025 Member

2020–2021 Subcommittee on Mainstreaming Gender Data

2020–2021 Committee Website Developer & Administrator, Communications Team [Link]

2019–2021 Newsletter Lead, Young Member Outreach Team

Committee on Strategic Management (AJE10)

2023–2025 Vice Chair

2023–2024 Events Coordinator

2021–2023 Research Coordinator

2021–2025 Member (Allowed to only serve on two TRB committees at once)

American Society of Civil Engineers

2025–PRESENT Co-Chair (invited), 2026 ASCE International Conference on Transportation & Development

2024–PRESENT Member, Transportation & Development Institute Education and Workforce Development Committee

2024–2025 Immediate Past Chair, Transportation & Development Institute Younger Member Committee

2024–2025 Program Chair (invited), 2025 ASCE International Conference on Transportation & Development

2023–2024 Chair, Transportation & Development Institute Younger Member Committee

2022–PRESENT Member, Transportation & Development Institute Younger Member Committee

2022 Legislative Fly-In, Washington, D.C.

2021–2022 Author, Roads Category, 2022 Report Card for New York's Infrastructure Committee

2021 Legislative Fly-In, Virtual

2020 Legislative Fly-In, Washington, D.C. (Primary event canceled due to COVID-19)

2021–PRESENT Associate Member

2019–2021 Student Member

Institute of Transportation Engineers

2016–PRESENT Member

International

2024–2025 Diversity & Inclusion Committee Mountain District Liaison

2024–PRESENT Equity Committee Chair

2024–PRESENT Equity Committee Member

2024 Council & Committee Liaison, Equity Committee

2022–2023 Traffic Wiki Project Group Member, Probability and Statistics (Chapter 2) Lead

2022–2023 Case Studies Subcommittee Chair, Equity Committee

2022–PRESENT Vice Chair, Education Council

2021–2024 Webinar Program Committee

2022–PRESENT Social Media Liaison, Education Council

2021–2024 Webinar Coordinator, Education Council

2018–2025 Diversity & Inclusion Committee

2018–2020 Student Membership Subcommittee

UArizona Student Chapter
2023–2025 Faculty Advisor

UMass Amherst Student Chapter
2018–2020 Executive Board Member
2017–2018 President
2015–2017 Vice President

Women’s Transportation Seminar
2018–2021 Member

UMass Amherst Student Chapter
2020–2021 Vice President
2019–2020 President
2018–2019 Vice President
2017–2018 Secretary

Transportation Research Forum
2023–PRESENT Member

Additional

2025 Human Behavior Emphasis Area Team Member, Arizona Strategic Highway Safety Plan
2024–PRESENT Panel Member, National Cooperative Highway Research Program (NCHRP) 20-44(57):
Implementing Scenario Planning Across Transportation Agencies
2024 Panel Member, Dwight D. Eisenhower Transportation Fellowship Local Competition, Uni-
versity of Arizona
2023–PRESENT Panel Member, National Cooperative Highway Research Program (NCHRP) Project NCHRP
17-125: Incorporating the Safe System Approach into Road Safety Audits
2023–2025 University of Arizona Representative and Member, Maricopa Association of Governments
(MAG) Transportation Safety Committee
2023–2025 Non-voting Member, Transportation Systems & Safety Subcommittee (TSSS), Pima Associa-
tion of Governments/Regional Transportation Authority
2021–2025 Project Technical Oversight Panel Member, Behavioral Traffic Safety Cooperative Research
Program (BTSCR) Project BTS-23: The Impacts of Experience on Teen Driving: Evidence
from the Naturalistic Driving Study
2020–2024 Member, Minnesota Gender Equity in Transportation (GET) Collaborative
2020 Simulation Fellow, 2020 NASPAA-Batten Student Simulation Competition: Sustainable
Cities, University of Texas at Arlington
2019–2021 New England Intelligent Transportation Society Board of Directors

University of Arizona Service & Activities

2024–2025 Building Pathways Mentor, NSF Program through College of Engineering
2024 Volunteer, Dinner with the Dean, ENGINEERING Access, Greater Equity, and Diversity
(ENGAGED) and Arizona’s Science, Engineering, and Math Scholars (ASEMS)
2024 Faculty Mentor, Place-based Health Informatics Research Education Program (PHIRE) for
Undergraduate Research
2024 FY25 Research, Innovation, & Impact Research Development Grants Spring Competitions
Reviewer
2024 Civil & Architectural Engineering & Mechanics Department Search Committee for Research
Assistant Professor in Transportation Position
2024 College of Engineering Fellowships Reviewer
2023–2024 Five Year Review Committee for Dominic Boccelli
2023 UA Rise Together “Life Lessons from the Appalachian Trail” Event Planning Committee
2023–PRESENT Civil & Architectural Engineering & Mechanics Department Awards Committee
2023–2025 Institute of Transportation Engineers University of Arizona Student Chapter Advisor

- 2023 Civil & Architectural Engineering & Mechanics Department Search Committee for Research Assistant Professor in Transportation Position
- 2022–2023 Civil & Architectural Engineering & Mechanics Department Search Committee for Assistant/Associate Professor in Transportation Position
- 2022 Center for Applied Transportation Sciences (CATS) Mobility Symposium Planning Committee
- 2022 Civil & Architectural Engineering & Mechanics Department Search Committee for Research Assistant Professor in Transportation Position
- 2022 Civil & Architectural Engineering & Mechanics Department Centennial Lecture Series Planning Committee
- 2022 Reviewer for RESTRUCT SEED Grant
- 2022 City of Tucson Internship Program Development and CAEM Department Liaison
- 2022 Faculty Development Communities for Promotion (FDCP) Mentoring Program, Office of the Provost
- 2022 Teaching Innovation Initiative, Kanto Student Engagement Educators Program, UA Office of Instruction and Assessment
- 2021–2022 Civil & Architectural Engineering & Mechanics Department Search Committee for Architectural Engineering Faculty Position
- 2021–2025 Civil & Architectural Engineering & Mechanics Department Undergraduate Studies Committee
- 2021 College of Engineering Strategic Planning Working Groups: Human Factors & Sociotechnical Systems (co-lead), Transportation/Air Travel/Autonomy (member), AI/ML (member)

University of Massachusetts Amherst Service

- 2020 Participant, Vice Chancellor of Diversity, Equity, and Inclusion Candidate Search
- 2019–2020 Assistant Organizer, Three Minute Thesis (3MT)
- 2019 Participant, College of Engineering Director of Career Planning & Student Development Candidate Search
- 2019 Participant, Civil & Environmental Engineering Department Head Candidate Search
- 2019 Volunteer Instructor Assistant, Women in Engineering Career Day
- 2019 Volunteer Instructor, Weir Family Summer Institute
- 2018–2019 College of Engineering Dean Search Committee Member
- 2017–2020 Volunteer, Annual Engineering Open House

Public Service

- 2024, 2025 Elf Owl Surveyer Volunteer with Tucson Audubon Society, Saguaro National Park, Tucson, AZ
- 2023 Participant, Federal Highway Administration Regional Traffic Systems Management & Operations Workshop, Tucson, AZ
- 2023 Participant, Federal Highway Administration Arizona Department of Transportation Roadway Data Improvement Program Workshop, Phoenix, AZ
- 2022 Team Member, Road Safety Assessment for Stone Avenue, Grant Rd to Ft. Lowell Rd, Tucson, AZ
- 2019 Amherst Middle School Sound Bites Café, "Transportation Engineering, Driver Distraction," 6 December, Amherst, MA
- 2018 Amherst Middle School Sound Bites Café, "Cars & Drones: Will drones distract drivers?" 30 November, Amherst, MA
- 2018 VIP Consultant Volunteer, Five College Datafest, 13–14 April, Amherst, MA

PUBLIC MEDIA APPEARANCES

- 2024 "What data research teaches us about traffic safety," Arizona Science, Arizona Public Media. [Link]

- 2024 "Arizona study examines traffic inequity," Arizona Public Media. [Link]
- 2022 "Here's what Phoenix is doing to make its deadly roadways safer," AZCentral. [Link]
- 2022 "Arizona's roads were even deadlier in 2021, according to early data," AZCentral. [Link]

PROFESSIONAL CERTIFICATIONS AND TRAININGS

- 2024 Building Pathways NSF-Funded Training, University of Arizona
- 2023–2024 Transforming Engineering with Asset-based Undergraduate Resources (TREASURE) NSF-Funded Training, University of Arizona
- 2023–2024 A Model for Human-Centered Engineering Education: Broadening Engineering Teaching with Theory-based Educational Resources (BETTER) NSF-Funded Training, Marquette University
- SINCE 2017 Engineer-In-Training (EIT)
- SINCE 2017 Remote Pilot Certification
- SINCE 2017 OSHA-10