

Alyssa Ryan

Department of Civil & Architectural Engineering & Mechanics, University of Arizona
340 Civil Engineering, 1209 East 2nd Street, Tucson, AZ 85721
alyssaryan@arizona.edu | alyssaryan.co | (520) 626-8462

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

RESEARCH & WORK EXPERIENCE

- 2021–PRESENT **University of Arizona** Tucson, AZ
Assistant Professor in Transportation Engineering
Department of Civil and Architectural Engineering and Mechanics
- 2021–PRESENT **University of Arizona** Tucson, AZ
Assistant Director
Center for Applied Transportation Sciences (CATS)
- 2020–2021 **Technical University of Munich** Munich, Germany
Visiting Research Scholar
Chair of Transportation Systems Engineering
Funded by the German Academic Exchange Program (DAAD) to contribute to the trans-European Smart Driver and Road Environment Assessment and Monitoring System (i-DREAMS) project
- 2018–2021 **University of Massachusetts** Amherst, MA
Graduate Student Researcher
Department of Civil and Environmental Engineering, Transportation Group
Funded by many agencies to lead several projects, including the Safety Research Using Simulation (SAFER-SIM) University Transportation Center, Massachusetts Department of Transportation, and Dwight D. Eisenhower Transportation Research Fellowship Program
- 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

- 2023 Invited Travel Grant, Research, Innovation, & Impact Research Development Grant, University of Arizona
- 2022 Inaugural Desai Travel Endowment Award, Department of Civil & Architectural Engineering & Mechanics, College of Engineering, University of Arizona
- 2022 Institute of Transportation Engineers (ITE) Young Leader to Follow
- 2022 Paper Selected, Elsevier's 2022 International Women's Day Special Issue
- 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

Refereed Journal Articles (*corresponding author, student for which I am the primary advisor)

19. Pan, M.* and **Ryan, A.** (2023) How to select distracted driving countermeasures evaluation metrics: A systematic review. *Journal of Transportation Safety & Security*. [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*. [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 and 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 and 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 (*corresponding author, student for which I am the primary advisor)

7. Zhang, L.*, Haroon, S., and **Ryan, A.** Py-CoSim: Python-Based Building Energy Co-Simulation Infrastructure. *Submitted to Energy*.

6. Haroon, S.* and **Ryan, A.** Understanding Key Factors in Automated Vehicle Collisions: Automating Data Extraction and Analyzing Key Insights using Explainable AI. *Submitted to Journal of Transportation Safety & Security.*
5. Haroon, S.* and **Ryan, A.** Towards equity in bicycling: Dynamics in bicycling behavior among different socioeconomic subgroups. *Submitted to Transportation Research Part D: Transport and Environment.*
4. Pan, M.*, Wong, S., Tainter, F., Woelfel, S., and **Ryan, A.** Integrating equity in transportation scenario planning: A systematic review. *Submitted to Transport Policy.*
3. Raha, F.*, Russo, B., and **Ryan, A.** Investigating the Impact of the COVID-19 Pandemic on Traffic Crash Injury Outcomes among Different Demographic Groups. *Submitted to Traffic Injury Prevention.*
2. Pan, M.* and **Ryan, A.** Developing a small participant framework: An investigation of mode choice influential factors. *Revised and resubmitted to Transportation Research Interdisciplinary Perspectives.*
1. Pan, M.* and **Ryan, A.** A Systematic Review of Behavior Change Methods: Implications on Transportation Mode Shift. *Submitted to Travel Behaviour and Society.*

Refereed Conference Papers & Extended Abstracts (*corresponding author, †presenter(s), student for which I am the primary advisor)

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. *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. *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. *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. *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. *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. *Road Safety & Simulation International Conference*, 17–19 October, The Hague, Netherlands. [Link]

Project Reports

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

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 GRANTS

Externally Funded Grants

12. **Ryan, A. (PI)** and Wu, Y.J. (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); \$25,000 (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); \$8,333 (Ryan).

9. Wu, Y.J. (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. Awarded €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. Awarded \$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. Awarded \$5,000.

Internally Funded Grants

1. **Ryan, A.** University of Massachusetts Amherst Graduate School. Fall 2019 Graduate School Predissertation Research Grant. 2019–2020. Awarded \$924.

PRESENTATIONS

Invited Talks (student for which I am the primary advisor)

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) 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.
41. **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.
40. **Ryan, A.** and Haroon, S. (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.
39. **Ryan, A.** (2023) Moderator & Discussant, "Technology and Autonomous Vehicles." *64th Transportation Research Forum*, 27-28 April, Chicago, IL.

38. Haron, S. 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.
37. **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.
36. **Ryan, A.** (2023) Leadership in a Hybrid World. *Institute of Transportation Engineers*, 8 February, online.
35. **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.
34. **Ryan, A.** (2022) An Introduction to Transportation Safety Equity. *Transportation Engineering and Pavement Design (CEE 363), University of Arizona*, 31 October, Tucson, AZ.
33. **Ryan, A.** (2022) Engineers Talk Writing. *Graduate Writing Lab, University of Arizona*, 5 October, online.
32. **Ryan, A.** (2022) Current ITS Research at UArizona. *ITS Norway Delegation Visit, Arizona Commerce Authority Luncheon*, 23 September, Phoenix, AZ.
31. **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.
30. **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.
29. **Ryan, A.** (2022) Closing Remarks. *Advanced Mobility Arizona Workshop, Arizona State University*, 9 September, Scottsdale, AZ.
28. **Ryan, A.** (2022) Brown Bag: Gender and Experiences of Personal Safety in Transportation. *Minneapolis-St. Paul Chapter, Transportation Research Forum*, 26 August, online.
27. **Ryan, A.** (2022) Virtual Roundtable: Thriving in nontraditional engineering paths. *American Society of Civil Engineers*, 21 July, online.
26. **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.
25. 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.
24. **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.
23. **Ryan, A.** (2022) Towards Equitable Road Safety: Vehicular Design and Resource Allocation Methods. *Arizona Institute of Engineers Meeting*, 24 February, Phoenix, AZ.
22. **Ryan, A.** (2021) Applications of Flashing Yellow Arrows at Right Turns. Does it Improve Ped & Bike Safety? *MassDOT Moving Together Conference*, 8 December, online.
21. **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.
20. **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.

19. **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.
18. **Ryan, A.** (2021) Vehicular Design and Resource Allocation Policies for Equitable Road Safety. *Friday Transportation Seminar, Portland State University*, 12 November, online. [Link]
17. **Ryan, A.** (2021) Graduate School Panel. *Professional Practice Seminar (CEE 488), University of Massachusetts Amherst*, 13 October, Amherst, MA.
16. **Ryan, A.** (2021) The Academic Job Market. *Teaching Seminar (ENGIN 697T), University of Massachusetts Amherst*, 13 & 20 October, Amherst, MA.
15. **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]
14. **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.
13. **Ryan, A.** (2021) ITE Women in Transportation Panel Discussion. *Institute of Transportation Engineers*, 16 April, online. [Link]
12. **Ryan, A.** (2021) Drone applications for spatial visualization and data analysis. *The Digital Earth (GEOG 105), University of South Carolina*, 31 March, online.
11. **Ryan, A.** (2021) Lifelong learning & graduate school. *Professional Practice Seminar (CEE 488), University of Massachusetts Amherst*, 1 March, online.
10. **Ryan, A.** (2021) Annotating Research Articles & the UMass Library. *Concepts of Traffic Safety (CEE 497L/597L), University of Massachusetts Amherst*, 22 February, online.
9. **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]
8. **Ryan, A.** (2020) Equity of Driver Protection Design. *Introduction to Civil & Environmental Engineering (ENGIN 111), University of Massachusetts Amherst*, 3 November, online.
7. **Ryan, A.** (2020) Leveraging Drone Technology as Transportation Professionals. *Transportation Seminar Series (CEE 695A), University of Massachusetts Amherst*, 3 September, 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 ([†]presenter(s), student for which I am the primary advisor)

40. Haroon, S.[†] and **Ryan, A.** (Accepted) Pros and cons of using Explainable AI in machine learning-based crash prediction models. *International Roads Federation Global Road to Tomorrow Conference & Exhibition*, 14–17 November, Phoenix, AZ.
39. Bhandari, S.[†] and **Ryan, A.** (Accepted) Designing for vulnerable road users: A case for gender equity in transportation. *International Roads Federation Global Road to Tomorrow Conference & Exhibition*, 14–17 November, Phoenix, AZ.
38. Wu, Y.[†], **Ryan, A.**[†], and Shamshiripour, A.[†] (Accepted) Advancements in Transportation Systems: The Role of Applied Research in Arizona. *Arizona Conference on Roads & Streets*, 1–3 November, Tucson, AZ.
37. Zhang, L.[†], Haroon, S., and **Ryan, A.** (Accepted) Py-CoSim: An Open-Source Python-EMS-Based Energyplus Co-Simulation Platform. *2023 ASHRAE Building Performance Analysis Conference*, 11–13 September, Austin, TX.
36. 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.
35. 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.
34. Haroon, S.[†] 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.
33. Haroon, S.[†] 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.
32. 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.
31. 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.
30. **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.
29. 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.
28. **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.
27. 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.

26. 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.
25. 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.
24. 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 nudgable 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 Parthasarthy, 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.

Webinars

5. **Ryan, A.** (2020) The Influence of Unmanned Aerial Systems on Driving Performance. *Safety Research Using Simulation (SAFER-SIM)*, 21 July. [Link]
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.

TEACHING EXPERIENCE

University of Arizona

- FALL 2023 Traffic Safety (CE 467/567)
Combined undergraduate and graduate section
- FALL 2022 Statistical Methods in Transportation Engineering (CE 461A/561A)
Combined undergraduate and graduate section, 8 students in person
INSTRUCTOR EVALUATION: 4.9/5.0
- SPRING 2022 Traffic Safety (CE 467/567)
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)
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)
One section, in person, ≈ 24 students

SERVICE

Journal Referee Work

- 2023–PRESENT Transportation Research Part D: Transport & Environment
2023–PRESENT Journal of Transportation Engineering, Part A: Systems
2022–PRESENT Safety Science
2022–PRESENT Transportation Research Interdisciplinary Perspectives
2022–PRESENT Journal of Advanced Transportation
2022–PRESENT Accident Analysis & Prevention
2022–PRESENT Transportation Injury 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–PRESENT Traffic Injury Prevention

Conference Referee Work

- 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
Equity in Transportation (AME10)
Human Factors of Infrastructure Design and Operations (ACH40)
Human Factors of Vehicles (ACH30)

- Information Systems and Technology (AED30)
- Low Volume Roads (AKD30)
- Traffic Signal Systems (AHB25)
- Transportation Demand Management (AEP60)
- Transportation Safety Management Systems (ACS10)
- Road User Measurement and Evaluation (ACH50)
- Safety Performance and Analysis (ACS20)
- Women and Gender in Transportation (AME20)
- 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

Conference and Event Leadership

- 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–PRESENT 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

National Science Foundation

2022–2023 Reviewer

Transportation Research Board

Committee on Strategic Management (AJE10)

2023–PRESENT Events Coordinator

2021–2023 Research Coordinator (Received Certificate of Appreciation in Jan. 2022)

2021–PRESENT Member

Committee on Women and Gender in Transportation (AME20)

2021–PRESENT Communications Coordinator (Received Certificate of Recognition for Outstanding Support in Jan. 2023)

2021–PRESENT 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

American Society of Civil Engineers

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

- 2022–PRESENT Traffic Wiki Project Group Member, Probability and Statistics (Chapter 2) Lead
- 2022–PRESENT Case Studies Subcommittee Chair, Equity Committee
- 2021–PRESENT Webinar Program Committee
- 2022–PRESENT Vice Chair, Education Council
- 2022–PRESENT Social Media Liaison, Education Council
- 2021–PRESENT Webinar Coordinator, Education Council
- 2018–PRESENT Diversity & Inclusion Committee
- 2018–2020 Student Membership Subcommittee

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

- 2023–PRESENT University of Arizona Representative and Member, Maricopa Association of Governments (MAG) Transportation Safety Committee
- 2023–PRESENT Non-voting Member, Transportation Systems & Safety Subcommittee (TSSS), Pima Association of Governments/Regional Transportation Authority
- 2021–PRESENT 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–PRESENT 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

- 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 (FDPC) 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–PRESENT 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

- 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

ADVISING

PhD Students

- 2022–PRESENT Saquib Haroon
 - 2023 Traffic Safety Scholar, Lifesavers Conference
 - National Institute for Transportation and Communities Travel Support Award
 - Engineering Dean's Fellowship, College of Engineering, UArizona
- 2022–PRESENT Sushmita Bhandari
 - National Institute for Transportation and Communities Travel Support Award
 - 2022 Katie Dusenberry Scholarship, Women's Transportation Seminar Tucson Chapter
- 2021–2022 Melrose (Meiyu) Pan (*Currently a Postdoctoral Associate at Oak Ridge National Laboratory*)
 - 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

- 2022–2023 Bailey Homan

Undergraduate Researcher Students

- 2023–PRESENT Camillah Shoo
- 2023–PRESENT Joann Chang
 - 2023 National Institute for Transportation and Communities Scholar Award

- 2023–PRESENT Cipriano De Luna Gutierrez
 - 2024 Transportation Research Board Minority Student Fellow
 - 2023 National Institute for Transportation and Communities Scholar Award
- 2023 Abigail Denninghoff
- 2022 Michaelyn Moses
- 2022 Ying-Tung Chou

Committee Member

PhD Students

- 2022–2023 Zirui (Raymond) Huang
- 2022–2023 Adrian Cottam
- 2021–2022 Xiaobo Ma

PROFESSIONAL CERTIFICATIONS AND TRAININGS

- 2023 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