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Short Biography

Dr. Jun Liu is an Associate Professor of Civil Engineering at the University of Alabama (UA), and the Director of the NextGen Transportation Lab at UA. He received his PhD from the University of Tennessee, Knoxville. Dr. Liu worked as a transportation planner at the Virginia Department of Transportation and as a post-doc researcher at the University of Texas at Austin. Dr. Liu's areas of research interests include shared mobility, travel behavior, road safety, responder safety, transportation planning, intelligent transportation systems, connected and/or automated vehicles, and sustainable transportation. **Most recently, Dr. Liu's research focuses on two key areas: 1) advancing multimodal mobility systems for rural and small urban communities, and 2) enhancing traffic incident responder safety and the efficiency of traffic enforcement and management. Both domains address the evolving transportation landscape, including electric vehicles, automation, and urban air mobility.** Dr. Liu has over 250 publications, including book chapters, journal articles, conference papers, and technical reports. Since joining UA in 2018, he has secured over \$21.8 million in funding across 30 projects, serving as the Principal Investigator (PI) on 17 of them. His funding comes from esteemed organizations such as the NSF, NIH/CDC, US DOT, US DOE, NOAA, AAA Foundation for Traffic Safety, State DOTs (Alabama and Georgia), and local agencies. Dr. Liu is a recipient of an NIH/CDC R01 award as the lead PI/PD. He currently serves as Managing Editor for the *Journal of Intelligent Transportation Systems*, Handling Editor for *Transportation Research Record*, Associate Editor for *IEEE Open Journal of Intelligent Transportation Systems*, and Editorial Board Member for *Accident Analysis & Prevention* and the *Journal of Safety Research*. Besides, he is a paper review coordinator for two TRB committees: ASC10 and AED50. Dr. Liu is a member of the TRB AKD80, TRB ACS10 and TRB AMR00(1).

Long Biography

Dr. Jun Liu is an Associate Professor (with tenure) of Civil, Construction and Environmental Engineering at the University of Alabama (UA), and the Director of the [NextGen Transportation Lab](#) at UA. He received his PhD in Civil Engineering from the University of Tennessee, Knoxville. Prior to joining UA in 2018, Dr. Liu worked as a transportation planner at the Virginia Department of Transportation and as a post-doc researcher at the University of Texas at Austin.

Dr. Liu's areas of research interests are innovations related to shared mobility, travel behavior, road safety, responder safety, transportation planning, intelligent transportation systems, connected and/or automated vehicles, and sustainable

transportation. Most recently, Dr. Liu's research has centered on two vital areas: 1) advancing future multimodal mobility systems for rural and small urban communities, and 2) improving the safety of traffic incident responders while enhancing the efficiency of traffic safety enforcement and management. Both domains address the dynamic evolution of transportation systems, including innovations such as electric vehicles, automation, and urban air mobility. He possesses expertise in Big Data analytics, machine learning, agent-based modeling, micro- and macro-simulations, spatial and/or temporal modeling, and statistical analysis. Dr. Liu has published over 250 scholarly works, encompassing book chapters, journal articles, conference papers, and technical reports.

Since joining UA in 2018, Dr. Liu has made significant contributions to securing over \$21.8 million in funding. He has been awarded a total of 30 projects, with 17 of them as the Principal Investigator (PI). The funding sources include prestigious organizations such as the National Science Foundation (NSF), National Institute of Health (NIH)/Centers for Disease Control and Prevention (CDC), US Department of Transportation (US DOT), US Department of Energy (US DOE), National Oceanic and Atmospheric Administration (NOAA), AAA Foundation for Traffic Safety, State Departments of Transportation (Alabama and Georgia), and various local agencies. Dr. Liu is a recipient of an NIH/CDC R01 award as the lead PI/PD.

Dr. Liu currently serves as a Managing Editor for the [Journal of Intelligent Transportation Systems: Technology, Planning, and Operations](#), a Handling Editor for [Transportation Research Record: Journal of Transportation Research Board](#), an Associate Editor for *IEEE Open Journal of Intelligent Transportation Systems*, and an Editorial Board Member for [Accident Analysis & Prevention](#) and the [Journal of Safety Research](#). Additionally, he is actively contributing to the academic community as a Paper Review Coordinator for the TRB Committee on Artificial Intelligence and Advanced Computing (AED50) for TRB Annual Meetings, and an Area Editor for The Joint COTA International Conference of Transportation Professionals. Dr. Liu also served on the Organizing Committee for the [Bridging Transportation Researchers](#) (BTR) Conference (BTR#1, BTR#2, BTR#3, and BTR#7).

Dr. Liu is a member of the TRB Committee on Geo-spatial Data Acquisition Technologies (AKD80), a member/friend of the TRB Standing Committee on Transportation Safety Management (ACS10), and a member of the TRB Joint-Subcommittee on Emergency Response AMR00(1). He was (2016-2019) a member of the TRB Standing Committee on Visualization in Transportation (AED80). Dr. Liu has served on an NSF Panel for the Humans, Disasters, and the Built Environment (HDBE) Program, and he also served as a panelist for the National Cooperative Highway Research Program (NCHRP) project titled "State and Local Impacts of Automated Freight Transportation Systems" under the project number NCHRP 20-102(22).

SUMMARY

Funding

- **30** funded projects, Total: **\$21.8 million**,
- **PI** for **17** projects and **Co-PI** for **13** projects.
- Funding agencies: NSF, NIH/CDC, USDOT, USDOE, AAA Foundation, ALDOT and GDOT.

Scholarly Works

- Refereed Journal Articles: **78**
- Book Chapters: **5**
- Technical Reports: **21**
- Invited Talks: **25**
- TRB Annual Meeting Papers (peer reviewed): **117**
- Other Conference Papers/Presentations: **46**
- Citations: **2,700+**; h-index: **29**; h10 index: **55** (Google Scholar)

Advising

- PhD (as chair): **5** (completed), **7** (current)
- Master's (as chair): **3** (completed), **1** (current)
- PhD (as committee member): **8** (completed), **3** (current)
- Master's (as committee member): **1** (completed)

Teaching

- Total number of classes: **15**
- Average instructor evaluation score: **4.53/5** (based on 227 students from Spring 2019 to Spring 2023)

Selected Services

- Managing Editor, Journal of Intelligent Transportation Systems, 2019 – date
- Handling Editor, Transportation Research Record (journal), 2019 – date
- Editorial Board Member, Accident Analysis & Prevention (journal), 2023 – date
- Editorial Board Member, Journal of Safety Research, 2022 – date
- Paper Review Coordinator, TRB ACS10 Transportation Safety Management Systems, 2024 – date
- Paper Review Coordinator, TRB AED50 Artificial Intelligence Applications, 2022 – date
- Panelist, NCHRP Project 20-102(22), 2019 – 2023
- Reviewer for 20+ journals, 5+ conferences, and 20+ TRB technical committees

Selected Awards

- Excellence in Research & Innovation Award (Emerging Scholar), Department of Civil, Construction and Environmental Engineering, The University of Alabama, 2022.
- Outstanding Reviewer, Transportation Research Part D, 2022.
- Nomination for AASHTO Research Advisory Committee (RAC) High Value Research, Georgia Department of Transportation, 2021.
- Best Paper Award, TRB Committee on Freeway Operations, 2020.

Research Areas

- Shared Mobility, Travel Demand Modeling (Transportation Planning)
- Travel Behavior & Driving Behavior
- Traffic Safety, Responder Safety & Incident Response Management
- Intelligent Transportation Systems, Connected & Automated Vehicles
- Sustainable Transportation

Contents

<i>Short Biography</i>	- 1 -
<i>Long Biography</i>	- 1 -
<i>SUMMARY</i>	- 3 -
<i>EDUCATION</i>	- 5 -
<i>APPOINTMENTS</i>	- 5 -
<i>RESEARCH AREAS</i>	- 5 -
<i>RESEARCH METHODS</i>	- 5 -
<i>PUBLICATIONS</i>	- 6 -
<i>CONFERENCE PAPERS & PRESENTATIONS</i>	- 15 -
<i>FUNDING</i>	- 31 -
<i>TEACHING & ADVISING</i>	- 32 -
<i>SERVICES</i>	- 35 -
<i>HONORS & AWARDS</i>	- 38 -

EDUCATION

Ph.D.	The University of Tennessee, Knoxville	Civil Engineering (Transportation)	2015
M.S.	The University of Tennessee, Knoxville	Statistics	2015
M.S.	Huazhong University of Science & Technology	Transportation Planning & Management	2011
B.S.	Huazhong University of Science & Technology	Transportation Engineering	2008

APPOINTMENTS

Associate Professor (tenured)	The University of Alabama	2024 – date
Assistant Professor (tenure-track)	The University of Alabama	2018 – 2024
Travel Demand Modeler (Planner)	Virginia Department of Transportation	2016 – 2018
Postdoctoral Fellow	The University of Texas at Austin	2016 – 2016
Research Coordinator	The University of Tennessee, Knoxville	2015 – 2016
Research Assistant	The University of Tennessee, Knoxville	2011 – 2015

RESEARCH AREAS

- Transportation Planning and Mobility
 - Travel Demand Modeling
 - Shared Mobility & Micro-mobility
 - Urban Air Mobility
 - Land Use and Infrastructure
- Transportation Safety
 - Responder Safety
 - Vehicle Occupant Safety
 - Vulnerable Road User Safety
- Human Factor
 - Travel Behavior
 - Driving Behavior
 - Technology Adoption
- Intelligent Transportation Systems
 - Traveler Information System
 - Traffic Incident Management
 - Connected & Automated Vehicles
- Sustainable Transportation
 - Fuel Economy and Emissions
 - Transportation Equity and Access (Rural Health)

RESEARCH METHODS

- Agent-Based Modeling
- Spatial and/or Temporal Modeling
- Artificial Intelligence/Machine Learning/Deep Learning
- Statistical Analysis
- Big Data Analytics
- Driving Simulation
- Neuropsychological Assessments
- Survey and Focus Groups

PUBLICATIONS

Google Scholar: <https://scholar.google.com/citations?user=zaBtp84AAAAJ&hl=en>

Scopus: <https://www.scopus.com/authid/detail.uri?authorId=57188712384>

Research Gate: https://www.researchgate.net/profile/Jun_Liu152

NIH My Bibliography: <https://www.ncbi.nlm.nih.gov/myncbi/jun.liu.14/bibliography/public/>

Refereed Journal Papers (total = 78) (*my student or postdoc trainee at the time of work)

1. Pena-Bastidas*, J., **Liu, J.**, Jones, S. and Lee, H.Y., 2025. The Role of Emerging Mobility Solutions in Shaping Care-Seeking Behaviors in Rural Communities: A National Survey with Stated Choice Experiment. *Transport Policy*, 162, pp. 313-324.
<https://doi.org/10.1016/j.tranpol.2024.12.016>
2. Yang*, C., **Liu, J.**, Zhang*, Z., Adanu, E., Penmetsa, P., and Jones, S., 2025. A Machine Learning Approach to Understanding the Road and Traffic Environments of Crashes Involving Driver Distraction and Inattention (DDI) on Rural Multilane Highways. *Journal of Safety Research*, 92, pp.14-26. <https://doi.org/10.1016/j.jsr.2024.11.011>
3. Sanni*, T., Chen, J., Shao, W., **Liu, J.** and Shi, Y., 2025. Investigating the Feasibility of Adopting Virtual Reality as a Method for Natural Hazard Risk Communication. *International Journal of Disaster Risk Reduction*. p.105296.
<https://doi.org/10.1016/j.ijdrr.2025.105296>
4. Bhuiya*, M.M.R, **Liu, J.**, Jones, S. and Nie, Q., 2025. Is There Any Association of Local Characteristics with Traffic Signal and Stop Sign Violation Induced Crashes? A hierarchical modeling based study from Alabama, USA. *Case Studies on Transport Policy*, p.101390.
<https://doi.org/10.1016/j.cstp.2025.101390>
5. Islam, R., Adanu, E., **Liu, J.** and Jones, S., 2025. The potential of using SAVs in evacuating vulnerable population during tornado early warning: A case study of Tuscaloosa County, Alabama. *Transportation Planning and Technology*, pp.1-23.
<https://doi.org/10.1080/03081060.2024.2445646>
6. Pena-Bastidas*, J., **Liu, J.** and Jones, S., 2024. Measuring Traffic Speed Change After the Reallocation of Road Space for Cycling: A Data-Driven Analysis for Bogotá. *Cities*, 153, p.105296. <https://doi.org/10.1016/j.cities.2024.105296>
7. Zhang*, Z., **Liu, J.**, Peña-Bastidas, J. & Jones, S., 2024. Charging Infrastructure Assessment for Shared Autonomous Electric Vehicles in 374 Small and Medium-Sized Urban Areas: An Agent-Based Simulation Approach. *Transport Policy*, 155, pp. 58-78.
<https://doi.org/10.1016/j.tranpol.2024.06.017>
8. Bhuiya*, M.M.R., Adanu, E.K., Jones, S., Okafor, S. and Liu, J., 2024. A Snapshot of Factors Associated with the Severity of Crashes Involving Physically Impaired Driver. *Safety*, 10(4), p.100. <https://doi.org/10.3390/safety10040100>
9. Zhang*, Z., Xu*, N., **Liu, J.** & Jones, S., 2024. Exploring spatial heterogeneity in factors associated with injury severity in speeding-related crashes: An integrated machine learning and spatial modeling approach. *Accident Analysis & Prevention*, 206, p.107697.
<https://doi.org/10.1016/j.aap.2024.107697>
10. Zhang*, Z., **Liu, J.**, Nie*, Q. & Jones, S., 2024. Shared Low-speed Autonomous Vehicles for Short-Distance Trips: Agent-Based Modeling with Mode Choice Analysis. *Transportation Planning and Technology*, in-press. <https://doi.org/10.1080/03081060.2024.2373322>

11. Bhuiya*, M. M. R., Shao, W., Jones, S. and **Liu, J.**, 2024. Toward A Comprehensive Framework for Accessibility Measures for Movement-Challenged Persons. *Transportation Research Record*, p.03611981241270162.
12. Bullard, C., Adanu, E.K., **Liu, J.**, Agyemang, W. and Jones, S., 2024. Segmenting and investigating pedestrian-vehicle crashes in Ghana: A latent class clustering approach. *African Transport Studies*, 2, p.100010.
13. Xu*, N., **Liu, J.**, Zhang*, Z. and Jones, S., 2024. Injury severity of police officers involved in traffic crashes: A spatial analysis of Alabama. *Safety Science*, 172, p.106406. <https://doi.org/10.1016/j.ssci.2023.106406>
14. Xu*, N., Nie*, Q., **Liu, J.**, and Jones, S., 2024. Linking short- and long-term impacts of the COVID-19 pandemic on travel behavior and travel preferences in Alabama: A machine learning-supported path analysis. *Transport Policy*, 151, pp. 46-62. <https://doi.org/10.1016/j.tranpol.2024.04.002>
15. Fisher, J., Bredikhina, O., Hockstad, T., Penmetsa, P., **Liu, J.** and Jones, S., 2024. Move-over Laws and Incident Response Personnel Safety in the USA. *Journal of Road Safety*, 35(3), pp.1-9.
16. Yang*, C., **Liu, J.**, Li*, X. and Barnett, T., 2023. Analysis of First Responder-Involved Traffic Incidents by Mining News Reports. *Accident Analysis & Prevention*, 192, p.107261. <https://doi.org/10.1016/j.aap.2023.107261>
17. **Liu, J.**, Xu*, N., Shi, Y., Rahman, M., Barnett, T. and Jones, S., 2023. Do First Responders Trust Connected and Automated Vehicles? A National Survey. *Transport Policy*, 140, pp.85-99. <https://doi.org/10.1016/j.tranpol.2023.06.012>
18. **Liu, J.**, Fu*, X., Hainen, A., Yang*, C., Villavicencio, L. and Horrey, W.J., 2023. Evaluating the impacts of vehicle-mounted Variable Message Signs on passing vehicles: implications for protecting roadside incident and service personnel. *Journal of Intelligent Transportation Systems*. <http://dx.doi.org/10.1080/15472450.2023.2227968>
19. Xu*, N., Nie*, Q., **Liu, J.** and Jones, S., 2023. Post-pandemic shared mobility and active travel in Alabama: A machine learning analysis of COVID-19 survey data. *Travel Behaviour and Society*, 32, p.100584. <https://doi.org/10.1016/j.tbs.2023.100584>
20. Fu*, X, **Liu J.**, Huang Z, Hainen A, and Khattak A., 2023. LSTM-based lane change prediction using Waymo open motion dataset: The role of vehicle operating space. *Digital Transportation and Safety* 2(2):112–123.
21. **Liu, J.**, Xu*, N., Shi, Y., Barnett, T. and Jones, S., 2023. Are first responders prepared for electric vehicle fires? A national survey. *Accident Analysis & Prevention*, 179, p.106903. <https://doi.org/10.1016/j.aap.2022.106903>
22. Zhang*, Z., **Liu, J.**, Li*, X., Fu*, X., Yang*, C. and Jones, S., 2023. Localizing safety performance functions for two-way STOP-controlled (TWST) three-leg intersections on rural two-lane two-way (TLTW) roadways in Alabama: A geospatial modeling approach with clustering analysis. *Accident Analysis & Prevention*, 179, p.106896. <https://doi.org/10.1016/j.aap.2022.106896>
23. Okafor, S., **Liu, J.**, Adanu, E.K. and Jones, S., 2023. Behavioral pathway analysis of pedestrian injury severity in pedestrian-motor vehicle crashes. *Transportation research interdisciplinary perspectives*, 18, p.100777. <https://doi.org/10.1016/j.trip.2023.100777>

24. Adanu, E.K., Lidbe, A., **Liu, J.** and Jones, S., 2023. A comparative study of factors associated with motorcycle crash severities under different causal scenarios. *Journal of Transportation Safety & Security*, 15(4), pp.376-396.
25. Bullard, C., Jones, S., Adanu, E.K., and **Liu, J.**, 2023. Crash severity analysis of single-vehicle rollover crashes in Namibia: A mixed logit approach. *IATSS Research*, 47(3), pp.318-324.
26. Fu*, X., Nie*, Q., Li*, X., **Liu, J.**, Nambisan, S. and Jones, S., 2022. The role of the built environment in emergency medical services delays in responding to traffic crashes. *Journal of transportation engineering, Part A: Systems*, 148(10), p.04022085. <https://ascelibrary.org/doi/full/10.1061/JTEPBS.0000726>
27. Zhang*, Z., Nie*, Q., **Liu, J.**, Hainen, A., Islam, N., Yang*, C., 2022. Machine learning based real-time prediction of freeway crash risk using crowdsourced probe vehicle data. *Journal of Intelligent Transportation Systems*. <https://doi.org/10.1080/15472450.2022.2106564>
28. Agyemang, W., Adanu, E.K., **Liu, J.** and Jones, S., 2022. A latent class multinomial logit analysis of factors associated with pedestrian injury severity of inter-urban highway crashes. *Journal of Transportation Safety & Security*, pp.1-21. <https://doi.org/10.1080/19439962.2022.2153952>
29. Lu*, W., **Liu, J.**, Fu*, X., Yang, J., Jones, S., 2022. Integrating machine learning into path analysis for quantifying behavioral pathways in bicycle-motor vehicle crashes. *Accident Analysis & Prevention*. <https://doi.org/10.1016/j.aap.2022.106622>
30. Fu*, X., **Liu, J.**, Jones, S., Barnett, T., and Khattak, A., 2022. From the past to the future: Modeling the temporal instability of safety performance functions. *Accident Analysis & Prevention*. <https://doi.org/10.1016/j.aap.2022.106592>
31. Fu*, X., Nie*, Q., **Liu, J.**, Zhang, Z. and Jones, S., 2022. How do college students perceive future shared mobility with autonomous Vehicles? A survey of the University of Alabama students. *International Journal of Transportation Science and Technology*, 11(2), pp.189-204. <https://doi.org/10.1016/j.ijtst.2021.11.006>
32. Wali, B., Khattak, A.J. and **Liu, J.**, 2022. Heterogeneity assessment in incident duration modelling: Implications for development of practical strategies for small- & large-scale incidents. *Journal of Intelligent Transportation Systems*, 26(5), pp.586-601. <https://doi.org/10.1080/15472450.2021.1944135>
33. Fu*, X., Nie*, Q., **Liu, J.**, Khattak, A., Hainen, A. and Nambisan, S., 2022. Constructing spatiotemporal driving volatility profiles for connected and automated vehicles in existing highway networks. *Journal of Intelligent Transportation Systems*, 26(5), pp.572-585. <https://doi.org/10.1080/15472450.2021.1944133>
34. Li*, X., Hu, Q., **Liu, J.**, Nambisan, S., Khattak, A., Lidbe, A., Lee, H. Y., 2022. Pathway analysis of relationships among community development, active travel behavior, body mass index, and self-rated health. *International Journal of Sustainable Transportation*, 16(4), pp.340-356. <https://doi.org/10.1080/15568318.2021.1872123>
35. **Liu, J.**, Jones, S. L., Adanu, E., Li*, X., 2021. Behavioral pathways in bicycle-motor vehicle crashes: From contributing factors, pre-crash actions, to injury severities. *Journal of Safety Research*. <https://doi.org/10.1016/j.jsr.2021.02.015>
36. Adanu, E., Hu, Q., **Liu, J.** and Jones, S., 2021. Better rested than sorry: data-driven approach to reducing drowsy driving crashes on interstates. *Journal of transportation engineering, Part A: Systems*, 147(10), p.04021067. <https://doi.org/10.1061/JTEPBS.0000569>

37. Mohammadnazar, A., Mahdinia, I., Ahmad, N., Khattak, A.J. and **Liu, J.**, 2021. Understanding how relationships between crash frequency and correlates vary for multilane rural highways: Estimating geographically and temporally weighted regression models. *Accident Analysis & Prevention*, p.106146. <https://doi.org/10.1016/j.aap.2021.106146>
38. Hu, Q., Li*, X., **Liu, J.** and Adanu, E.K., 2021. A low-cost approach to identify hazard curvature for local road networks using open-source data. *Transportation Research Interdisciplinary Perspectives*, 10, p.100393. <https://doi.org/10.1016/j.trip.2021.100393>
39. Zhang*, Z., **Liu, J.**, Li*, X., Khattak, A., 2021. Do Larger Sample Sizes Increase the Reliability of Traffic Incident Duration Models? A Case Study of East Tennessee Incidents. *Transportation Research Record*. <https://doi.org/10.1177/0361198121992063>
40. Adanu, E.K., Li*, X., **Liu, J.** and Jones, S., 2021. An Analysis of the Effects of Crash Factors and Precrash Actions on Side Impact Crashes at Unsignalized Intersections. *Journal of Advanced Transportation*. <https://doi.org/10.1155/2021/6648523>
41. Li*, X., **Liu, J.**, Yang*, C. and Barnett, T., 2021. Bayesian approach to developing context-based crash modification factors for medians on rural four-lane roadways. *Transportation research record*, 2675(9), pp.1316-1330.
42. Li*, X., Penmetsa, P., **Liu, J.**, Hainen, A. M., Nambisan, S., 2021. Severity of emergency natural gas distribution pipeline incidents: Application of an integrated spatio-temporal approach fused with text mining. *Journal of Loss Prevention in the Process Industries*, 69. <https://doi.org/10.1016/j.jlp.2020.104383>
43. Li*, X., **Liu, J.**, Zhang*, Z., Parrish, A. S., Jones, S. L., 2021. A spatiotemporal analysis of motorcyclist injury severity: findings from 20 years of crash data from Pennsylvania. *Accident Analysis & Prevention*, 151. <https://doi.org/10.1016/j.aap.2020.105952>
44. **Liu, J.**, Li*, X. and Khattak, A.J., 2020. An integrated spatio-temporal approach to examine the consequences of driving under the influence (DUI) in crashes. *Accident Analysis & Prevention*, 146, p.105742. <https://doi.org/10.1016/j.aap.2020.105742>
45. **Liu, J.** and Khattak, A., 2020. Informed decision-making by integrating historical on-road driving performance data in high-resolution maps for connected and automated vehicles. *Journal of Intelligent Transportation Systems*, 24(1), pp.11-23.
46. **Liu, J.**, Khattak, A.J., Li*, X., Nie, Q.* and Ling, Z., 2020. Bicyclist injury severity in traffic crashes: A spatial approach for geo-referenced crash data to uncover non-stationary correlates. *Journal of Safety Research*, 73, pp.25-35. DOI: 10.1016/j.jsr.2020.02.006
47. **Liu, J.**, Khattak, A., Han, L. and Yuan, Q., 2020. How much information is lost when sampling driving behavior data? Indicators to quantify the extent of information loss. *Journal of Intelligent and Connected Vehicles*. Vol. 3 No. 1, pp. 17-29.
48. **Liu, J.**, Jones, S. and Adanu, E., 2020. Challenging human driver taxis with shared autonomous vehicles: a case study of Chicago. *Transportation Letters*, 12(10), pp.701-705.
49. **Liu, J.**, Nambisan, S., Li*, X. and Fu*, X., 2020. Are young Americans carless across the United States? A spatial analysis. *Transportation research part D: transport and environment*, 78, p.102197.
50. Zhai, G., Yang, H. and **Liu, J.**, 2020. Is the front passenger seat always the "death seat"? An application of a hierarchical ordered probit model for occupant injury severity. *International journal of injury control and safety promotion*, 27(4), pp.438-446.

51. Lu*, W., **Liu, J.**, Mao, J., Hu, G., Gao, C. and Liu, L., 2020. Macroscopic Fundamental Diagram Approach to Evaluating the Performance of Regional Traffic Controls. *Transportation Research Record*, p.0361198120923359.
52. Li*, X., **Liu, J.**, Khattak, A. and Nambisan, S., 2020. Sequential prediction for large-scale traffic incident duration: application and comparison of survival models. *Transportation research record*, 2674(1), pp.79-93.
53. **Liu, J.**, Khattak, A.J., Li*, X. & Fu*, X., 2019. A spatial analysis of the ownership of alternative fuel and hybrid vehicles. *Transportation Research Part D: Transport and Environment*, 77, pp.106-119. DOI: 10.1016/j.trd.2019.10.018
54. **Liu, J.**, Hainen, A., Li, X., Nie, Q. and Nambisan, S., 2019. Pedestrian injury severity in motor vehicle crashes: an integrated spatio-temporal modeling approach. *Accident Analysis & Prevention*, 132, p.105272. DOI:10.1016/j.aap.2019.105272.
55. Rios-Torres, J., **Liu, J.** and Khattak, A., 2019. Fuel consumption for various driving styles in conventional and hybrid electric vehicles: Integrating driving cycle predictions with fuel consumption optimization. *International Journal of Sustainable Transportation*, 13(2), pp.123-137. DOI: 10.1080/15568318.2018.1445321
56. Wali, B., Khattak, A.J., Greene, D.L. and **Liu, J.**, 2019. Fuel economy gaps within and across garages: A bivariate random parameters seemingly unrelated regression approach. *International Journal of Sustainable Transportation*, 13(5), pp.324-339. DOI: 10.1080/15568318.2018.1466222
57. **Liu, J.** & Khattak, A., 2018. Are gates at rail grade crossings always safe? Examining motorist gate-violation behaviors using path analysis. *Transportation Research Part F: Traffic Psychology and Behaviour*, 55, pp.314-324. DOI: 10.1016/j.trf.2018.03.014
58. **Liu, J.**, Khattak, A.J., Chen, C., Wan, D., Ma, J. and Hu, J., 2018. Revisiting hit-and-run crashes: a geo-spatial modeling method. *Transportation Research Record*, 2672(38), pp.81-92. DOI: 10.1177/0361198118773889.
59. Wali, B., Greene, D.L., Khattak, A.J. and **Liu, J.**, 2018. Analyzing within garage fuel economy gaps to support vehicle purchasing decisions—A copula-based modeling & forecasting approach. *Transportation Research Part D: Transport and Environment*, 63, pp.186-208. DOI: 10.1016/j.trd.2018.04.023
60. Zhang, M., Khattak, A.J., **Liu, J.** and Clarke, D., 2018. A comparative study of rail-pedestrian trespassing crash injury severity between highway-rail grade crossings and non-crossings. *Accident Analysis & Prevention*, 117, pp.427-438. DOI: 10.1016/j.aap.2018.02.001
61. Loeb, B., Kockelman, K.M. and **Liu, J.**, 2018. Shared autonomous electric vehicle (SAEV) operations across the Austin, Texas network with charging infrastructure decisions. *Transportation Research Part C: Emerging Technologies*, 89, pp.222-233. *Transportation Research Part C: Emerging Technologies*, 89, 222-233. DOI: 10.1016/j.trc.2018.01.019.
62. **Liu, J.**, Kockelman, K.M., Boesch, P.M. and Ciari, F., 2017. Tracking a system of shared autonomous vehicles across the Austin, Texas network using agent-based simulation. *Transportation*, 44(6), pp.1261-1278. DOI: 10.1007/s11116-017-9811-1.
63. **Liu, J.**, Khattak, A.J. and Wali, B., 2017. Do safety performance functions used for predicting crash frequency vary across space? Applying geographically weighted

- regressions to account for spatial heterogeneity. *Accident Analysis & Prevention*, 109, pp.132-142. DOI: 10.1016/j.aap.2017.10.012.
64. **Liu, J.**, Khattak, A. and Wang, X., 2017. A comparative study of driving performance in metropolitan regions using large-scale vehicle trajectory data: Implications for sustainable cities. *International Journal of Sustainable Transportation*, 11(3), pp.170-185. DOI: 10.1080/15568318.2016.1230803.
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Book Chapters (5)

79. Elefteriadou, L., Leonard, B., Du, L., Ma, W., **Liu, J.**, Zhang, K., Ma, J., Song, Z., Li, X. and Erdogan, S., 2019, July. Enabling Transportation Networks with Automated Vehicles: From Individual Vehicle Motion Control to Networked Fleet Management. In *Automated Vehicles Symposium* (pp. 49-62). Springer, Cham.
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Technical Reports (21)

84. **Liu, J.** (PI), Xu, N., Pena-Bastidas, J., Hainen, A., & Qian, X., 2025. Managing the Traffic Impacts of Highway Infrastructure Constructions: A Framework for Construction planning. Submitted to Alabama Department of Transportation, 2025.
85. **Liu, J.** (PI), Xu, N., Penmetsa, P., Barnett, T., Pate, J., and Jones, S., 2024. *Developing a Near-Miss Reporting System for Roadside Responders* (Technical Report). Washington, D.C.: AAA Foundation for Traffic Safety. <https://aaafoundation.org/developing-a-near-miss-reporting-system-for-roadside-responders-report/>
86. **Liu, J.** (PI), Zhang Z., Hainen, A., Jones, S., Barnett, T., and Burdette, S., 2024. *Proactive Traffic Incident Management in Alabama*. Submitted to Alabama Department of Transportation, 2024. https://rosap.ntl.bts.gov/view/dot/78177/dot_78177_DS1.pdf
87. **Liu, J.** (PI), Penmetsa, P., Yang, C., Hainen, A. & Barnett, T. 2023. *Protecting Roadside Workers: Field Evaluation of a Vehicle-Mounted Variable Message Sign and Examination of*

- Worker Perceptions and Use of Countermeasures* (Technical Report). Washington, D.C.: AAA Foundation for Traffic Safety. <https://aaafoundation.org/protecting-roadside-workers-field-evaluation-of-a-vehicle-mounted-variable-message-sign-and-examination-of-worker-perceptions-and-use-of-countermeasures/>
88. **Liu, J.** (PI), & S. Jones. 2023. *Development of Alabama-specific Safety Performance Functions for Intersections*. Submitted to Alabama Department of Transportation, 2023.
 89. **Liu, J.** (PI), P. Penmetsa, X. Li., & T. Barnett. 2020. *Safety Performance of Rural Four-Lane Undivided Roadways and Rural Four-Lane Roadways with a Two-Way Left-Turn Lane*. FHWA-GA-21-1915. Submitted to Georgia Department of Transportation, 2020. <https://rosap.ntl.bts.gov/view/dot/58009>
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 92. **Liu, J.** (Co-PI), et al., 2020. Chapter 4 and 5 of I-10 Mobile River Bridge: A Macroscopic Study of No-Build Implications. Submitted to Alabama Department of Transportation, 2020.
 93. **Liu, J.** (PI), et al., 2020. *A Cost-Benefit Analysis of Widening AL-167: A Macroscopic Study*. Submitted to Wiregrass Economic Development Corporation Enterprise, Alabama. 2020
 94. **Liu, J.**, A. Nichols & K. Kockelman. *Chapter 8 of Bringing Smart Transport to Texans: Ensuring the Benefits of a Connected and Autonomous Transport System in Texas* (No. FHWA/TX-16/0-6838-2). Submitted to Texas Department of Transportation, 2016.
 95. Kockelman, K., L. Loftus-Otway, D. Stewart, A. Nichols, W. Wagner, J. Li, S. Boyles, M. Levin & **J. Liu**. *Best Practices Guidebook for Preparing Texas for Connected and Automated Vehicles* (No. 0-6849-P1). TxDOT Project 0-6849: Implications of Automated Vehicles on Safety, Design and Operation of the Texas Highway System. Submitted to Texas Department of Transportation, 2016.
 96. Kockelman, K., L. Loftus-Otway, D. Stewart, A. Nichols, W. Wagner, S. Boyles, M. Levin, , **J. Liu**, K. Perrine, S. Kilgore & K.M. Gurumurthy. *Best Practices for Modifying Transportation Design, Planning, and Project Evaluation in Texas* (No. 0-6847-P1). TxDOT Project 0-6847: An Assessment of Autonomous Vehicles: Traffic Impacts and Infrastructure Needs. Submitted to Texas Department of Transportation, 2017.
 97. Khattak, A., **J. Liu**, & B. Wali, *Highway Safety Manual: Spatial Heterogeneity, Transferability, Non-Linearities in Safety Performance Functions*. Submitted to Southeastern Transportation Center (Sponsored by US Department of Transportation), 2016.
 98. Khattak, A., **J. Liu**, B. Wali, M. Kamrani & M. Zhang, *Big Data Generated by Connected and Automated Vehicles for Safety Monitoring, Assessment and Improvement*. Submitted to Southeastern Transportation Center (Sponsored by US Department of Transportation), 2016.
 99. Greene, D., A. Khattak, **J. Liu**, J. Hopson, X. Wang & R. Goeltz. *How Do Motorists' Own Fuel Economy Estimates Compare with Official Government Ratings? A Statistical Analysis*. Submitted to Oak Ridge National Laboratory, 2015.

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101. Khattak, A., **J. Liu** & M. Zhang. *Highway Safety Manual: Enhancing the Work Zone Analysis Procedure*. Submitted to Southeastern Transportation Center (Sponsored by US Department of Transportation), 2015.
102. Khattak, A., **J. Liu**, X. Wang & M. Zhang, *What Is the Extent of Harm in Railroad Crashes?* Submitted to National University Rail Center (Sponsored by US Department of Transportation), 2015
103. Khattak A., X. Wang, **J. Liu**, J. Bandeira & S. Son. *Reducing Energy Use and Emissions through Innovative Technologies and Community Designs*. Submitted to Transportation for Livability by Integrating Vehicles and the Environment (Sponsored by US Department of Transportation), 2015.
104. Khattak A., X. Wang, S. Son, & **J. Liu**. *Data Needs Assessment for Making Transportation Decisions in Virginia*. Submitted to Virginia Department of Transportation, Richmond, VA, 2014.

CONFERENCE PAPERS & PRESENTATIONS

Invited Talks (25)

1. Liu, J., Safeguarding First Responders in the Era of Evolving Transportation Systems, Alabama Road Safety Conference, Gulf Shores, AL, October 2024.
2. Liu, J., Safeguarding First Responders in the Era of Evolving Transportation Systems, Wisconsin ITE Safety Council Meeting, November 2023.
3. Liu, J., Shared Autonomous Vehicles for Small and Medium-Sized Urban Areas in the United States, Dept. of Geography Colloquium, Tuscaloosa, AL, September 2023.
4. Liu, J., Envisioning Shared Autonomous Vehicles for 374 Small and Medium-Sized Urban Areas in the United States. ITS America Conference & Expo 2023. Grapevine, TX, April 2023.
5. Liu, J., Are First Responders Prepared for Electrification and Automation of Highway Transportation? UA ECE Graduate Research Seminar. Tuscaloosa, AL, April 2023.
6. Liu, J., Are First Responders Prepared for Electrification and Automation of Highway Transportation? The University of Tennessee. Knoxville, TN. February 2023.
7. Liu, J., Are First Responders Prepared for Electrification and Automation of Highway Transportation? A National Survey. The 25th COTA-TRB Winter Symposium. Washington, DC, January 2023.
8. Liu, J., DTSUMO: A “Digital Twin” Traffic Simulation Tool for Network-Wide Real-Time Traffic Monitoring and Management. 2022 Gulf Region Intelligent Transportation Society (GRITS) Fall Workshop. Starkville, MS, September 2022
9. Liu, J., Spatial and/or Temporal Modeling for Transportation Research. 2022 International Conference on Frontiers of Traffic and Transportation Engineering (FTTE 2022), Plenary Session. Online. June 2022.
10. Liu, J., DTSUMO: A “Digital Twin” Traffic Simulation Tool for Network-Wide Real-Time Traffic Monitoring and Management. ASCE International Conference on Transportation & Development, Session: Digital Twin and Applications. Seattle, WA, June 2022
11. Liu, J., Simulation of Autonomous and Connected Vehicles (CAV) on Freeway Environments, Freeway & CAV Simulation Subcommittee Meeting, TRB 101st Annual Meeting. Washington, DC, January 2022.
12. Liu, J., *Safety Performance of Rural Four-Lane Roadways – A Data-Driven Approach of Evaluating and Recommending Roadway Median Types*. The 2021 Georgia Transportation Summit. Athens, GA, March 2021.
13. Liu, J., *Writing A Research Paper & Spatial Modeling*. The University of Tennessee ITE Student Chapter Meeting. Virtual. July 2020.
14. Liu, J., *Applying to Graduate School in US and Transportation Research*. Southwest Jiaotong University. Virtual. July 2020.
15. Liu, J., *Challenging Human Driver Taxis with Shared Autonomous Vehicles*. The 2019 Automated Vehicles Symposium in Orlando, FL, July 2019.
16. Liu, J., *Opportunities for Connected & Automated Vehicles: Development and Deployment*. College of Engineering, Job Talk at the University of Alabama, Tuscaloosa, AL. February 2018.

17. Liu, J., *Opportunities for Connected & Automated Vehicles: Development and Deployment*. College of Engineering, Job Talk at the University of Texas at San Antonio, TX. February 2018.
18. Liu, J., *Opportunities for Connected & Automated Vehicles: Development and Deployment*. Job Talk at the Florida Polytechnic University, Lakeland, FL. February 2018.
19. Liu, J., *Webinar: Simulations of Shared Autonomous Vehicles using MATSim*. Ford Motor Company. November 2017.
20. Liu, J., *The Roles of Big Data and Connected & Automated Vehicles in Transportation Systems*. Chang'an University, Xi'an, China. December 2016.
21. Liu, J., *Connected & Automated Vehicles in Smart Transportation Systems*. Huazhong University of Science & Technology, Wuhan, China. December 2016.
22. Liu, J., *Driving Volatility in Instantaneous Driving Behaviors: A Research Framework for Large-scale Vehicular Trajectory Data*. Job Talk at the Department of Civil & Environmental Engineering, Mississippi State University. March 2016.
23. Liu, J., *The Role of Pre-crash Driver Actions in Work Zone Crashes*. Transportation Seminar Series at the University of Tennessee, Knoxville, TN. November 2015.
24. Liu, J., *Customizing Driving Cycles for Fuel Economy Estimation*. The Tennessee Section Institute of Transportation Engineers 2015 Summer Meeting, Gatlinburg, TN. July 2015
25. Liu, J., *Data Analytics for Connected Vehicle Data*. Southeastern Smart Mobility Consortium at the University of Tennessee, Knoxville, TN. April 2015.

Refereed TRB Annual Meeting Papers (117)

26. Ningzhe Xu, Javier Pena-Bastidas, Chenxuan Yang, Jun Liu, Trayce Hockstad, Steven Jones, 2025. How would Urban and Regional Air Mobility (URAM) Affect Our Relocation Decisions: A Machine Learning-Supported Path Analysis. TRBAM-25-04564. Presented at The Transportation Research Board 104th Annual Meeting, January 2025, Washington D.C.
27. Zihe Zhang, Ningzhe Xu, Jun Liu, Steven Jones, 2025. How Do University Students Perceive Shared Low-Speed Autonomous Vehicle Mobility Services on Campus: An Interpretable Machine Learning-Supported Path Analysis. TRBAM-25-05393. Presented at The Transportation Research Board 104th Annual Meeting, January 2025, Washington D.C.
28. Javier Pena-Bastidas, Jun Liu, Steven Jones, 2025. Spatial Order of Regional Travel Demand: A study of 486 Urbanized Areas in the United States. TRBAM-25-04569. Presented at The Transportation Research Board 104th Annual Meeting, January 2025, Washington D.C.
29. Zihe Zhang, Chenxuan Yang, Jun Liu, Steven Jones, 2025. Feasibility Assessment of a Multimodal Urban Air Mobility System in Small and Medium-Sized Urban Areas: Integrating Shared Autonomous Vehicles and Vertical Take-Off and Landing Aircraft. TRBAM-25-05167. Presented at The Transportation Research Board 104th Annual Meeting, January 2025, Washington D.C.
30. Ningzhe Xu, Jun Liu, Mizanur Rahman, Yangming Shi, Steven Jones, 2025. Exploring the Interplay between Trust in Human Drivers and Autonomous Vehicles: A Machine Learning-Supported Path Analysis. TRBAM-25-04553. Presented at The Transportation Research Board 104th Annual Meeting, January 2025, Washington D.C.

31. Xiao Zou, Jiayi Kong, Zihe Zhang, Jun Liu, Alex Hainen, Steven Jones, Asad Khattak, 2025. Segment-Level and Intersection-Level Driving Volatility Analysis Using Large-Scale Crowdsourced Vehicle Movement Data. TRBAM-25-02797. Presented at The Transportation Research Board 104th Annual Meeting, January 2025, Washington D.C.
32. Yanfang Su, Ningzhe Xu, Jun Liu, Steven Jones, 2025. The Role of Insurance in Nighttime Hit-and-Run Crashes: A Geo-Spatial Analysis. TRBAM-25-02795. Presented at The Transportation Research Board 104th Annual Meeting, January 2025, Washington D.C.
33. Ningzhe Xu, Yiming Xu, Jun Liu, Junfeng Jiao, 2025. How Do EV Crashes Differ from ICEV Crashes: A Comparative Study of Pennsylvania. TRBAM-25-00607. Presented at The Transportation Research Board 104th Annual Meeting, January 2025, Washington D.C.
34. Yanfang Su, Zihe Zhang, Jun Liu, Steven Jones, 2025. Exploring Spatial Variations in Factors Influencing Bicyclist Injury Severity in Traffic Crashes: A Spatial Machine Learning Approach. TRBAM-25-02793. Presented at The Transportation Research Board 104th Annual Meeting, January 2025, Washington D.C.
35. Javier Pena-Bastidas. Jun Liu, Hee Y. Lee, Steven Jones, 2025. The Role of Emerging Mobility Solutions in Shaping Care-Seeking Behaviors in Rural Communities: A National Survey with Stated Choice Experiment. TRBAM-25-02131. Presented at The Transportation Research Board 104th Annual Meeting, January 2025, Washington D.C.
36. Javier Pena-Bastidas, Ningzhe Xu, Jun Liu, Teng Wang, Steven Jones, Reg Souleyrette, 2025. Examining Spatial Disparities in Safety Benefits from Automated Vehicle Adoption in Alabama and Kentucky. TRBAM-25-04566 . Presented at The Transportation Research Board 104th Annual Meeting, January 2025, Washington D.C.
37. Xiao Zou, Ningzhe Xu, Jun Liu, 2025. Examining the Spatially Varying Correlates of Police Injury Severity: A Study of Pennsylvania. TRBAM-25-02845. Presented at The Transportation Research Board 104th Annual Meeting, January 2025, Washington D.C.
38. Jiayi Kong, Xiao Zou, Jun Liu, Weike Lu, 2025. Move Over or Slow Down? A Simulation-Based Evaluation of the Safety Impact of Motorist Actions in Compliance with Move Over Laws. TRBAM-25-02136. Presented at The Transportation Research Board 104th Annual Meeting, January 2025, Washington D.C.
39. Ningzhe Xu, Jun Liu, Zihe Zhang, Steven Jones, 2025. How Do Motorists' Pre-crash Behaviors Contribute to the Injury Severity of Police Officers? Using Interpretable Machine Learning to Untangle the Behavioral Pathways in Police-Involved Crashes. TRBAM-25-00712. Presented at The Transportation Research Board 104th Annual Meeting, January 2025, Washington D.C.
40. Ningzhe Xu, Jun Liu, Steven Jones, 2025. Who Need Public Transit to Evacuate? A National Household Survey Insight. TRBAM-25-00714. Presented at The Transportation Research Board 104th Annual Meeting, January 2025, Washington D.C.
41. Ziming Liu, Jiuyi Xu, Jun Liu, Yangming Shi, 2025. Enhancing Alternative Fuel Vehicle Emergency Response Through the Integration of Retrieval-Augmented Generation Enabled Large Language Model and Extended Reality. TRBAM-25-04759. Presented at The Transportation Research Board 104th Annual Meeting, January 2025, Washington D.C.
42. Zhe Li, Tianle Li, Weike Lu, Guojing Hu, Jun Liu, Yong Zhang, 2025. Modeling Drone-guided Evacuation in Subway Fire Scenario: Case Study In Lumu Station of Suzhou Subway.

- TRBAM-25-04284. Presented at The Transportation Research Board 104th Annual Meeting, January 2025, Washington D.C.
43. Sunday Okafor, Steven Jones, Cailis Bullard, Praveena Penmetsa, Emmanuel Adanu, Jun Liu, 2025. Integrating Connected Vehicle Hard Braking Event Data for Proactive Road Network Safety Screening. TRBAM-25-05230. Presented at The Transportation Research Board 104th Annual Meeting, January 2025, Washington D.C.
 44. Olga Bredikhina, Justin Fisher, Trayce Hockstad, Praveena Penmetsa, Jun Liu, Steven Jones, 2025. Move-Over Laws and Incident Response Personnel Safety in the United States. TRBAM-25-02288. Presented at The Transportation Research Board 104th Annual Meeting, January 2025, Washington D.C.
 45. Jun Liu, Javier Pena-Bastidas, Zihe Zhang, and Steven Jones, 2024. Enabling Dynamic Ridesharing in Shared Autonomous Vehicle Fleets: A Study of 374 Small and Medium-Sized Urban Areas. Presented at The Transportation Research Board 103rd Annual Meeting, January 2024, Washington D.C.
 46. Jun Liu, Zihe Zhang, Javier Pena-Bastidas, and Steven Jones, 2024. Charging Infrastructure Assessment for Shared Autonomous Electric Vehicles in 374 Small and Medium-Sized Urban Areas: An Agent-Based Simulation Approach. Presented at The Transportation Research Board 103rd Annual Meeting, January 2024, Washington D.C.
 47. Yangming Shi, Ziming Liu, and Jun Liu, 2024. Preparing First Responders for Future Electrical Vehicle Emergencies Through Multimodality Virtual Reality Training Systems. Presented at The Transportation Research Board 103rd Annual Meeting, January 2024, Washington D.C.
 48. Ningzhe Xu, Jun Liu, Zihe Zhang, and Steven Jones, 2024. Injury Severity of Police Officers Involved in Traffic Crashes: A Spatial Analysis of Alabama. Presented at The Transportation Research Board 103rd Annual Meeting, January 2024, Washington D.C.
 49. Muhammad Sami Irfan, Mizanur Rahman, Abhay Lidbe, Jun Liu, Yangming Shi, and Sheila Black, 2024. Public Perception of Autonomous Vehicles and Different External Human Machine Interface Designs: Findings from a National Survey. Presented at The Transportation Research Board 103rd Annual Meeting, January 2024, Washington D.C.
 50. Chenxuan Yang, Jun Liu, Sophie Menner, Xinwu Qian, and Steven Jones, 2024. Examining the Impact of Urban Air Mobility on Small and Medium Urban Areas: Two Scenarios of Long-Distance Commuting and Emergency Transportation Accessibility. Presented at The Transportation Research Board 103rd Annual Meeting, January 2024, Washington D.C.
 51. Zihe Zhang, Chenxuan Yang, Jun Liu, Cong Chen, and Steven Jones, 2024. Revisiting the Roles of Speeds in Traffic Crashes: A Geographically Weighted Neural Network Approach. Presented at The Transportation Research Board 103rd Annual Meeting, January 2024, Washington D.C.
 52. Riffat Islam, Emmanuel Adanu, Jun Liu, and Steven Jones, 2024. The Potential of Using Shared Autonomous Vehicles in Evacuating Vulnerable Population During Tornado Early Warning: A Case Study of Tuscaloosa County, Alabama. Presented at The Transportation Research Board 103rd Annual Meeting, January 2024, Washington D.C.
 53. Javier Pena-Bastidas, Jun Liu, and Steven Jones, 2024. Relocating Road Space to Cyclist: Impacts on Motorized Traffic from the Automobile Driver Perspective in Bogotá,

- Colombia. Presented at The Transportation Research Board 103rd Annual Meeting, January 2024, Washington D.C.
54. Rongshen Zhao, Jun Liu, Alexander Hainen, Asad Khattak, and Steven Jones, 2024. Mapping Location-Based Driving Volatility and Road Safety: A Study Using Large-Scale Crowdsourced Vehicle Movement Data. Presented at The Transportation Research Board 103rd Annual Meeting, January 2024, Washington D.C.
 55. Jeffery Bullard, Emmanuel Adanu, Jun Liu, William Agyemang, and Steven Jones, 2024. Investigating Pedestrian Groups and Injury Severities in Ghana: A Latent Class Analysis with Mixed Logit Approach. Presented at The Transportation Research Board 103rd Annual Meeting, January 2024, Washington D.C.
 56. Sunday Okafor, Abhay Lidbe, Emmanuel Adanu, Jun Liu, and Steven Jones, 2024. Assessing the Differences in Travel Burden Among Commuters in U.S. Metropolitan Areas. Presented at The Transportation Research Board 103rd Annual Meeting, January 2024, Washington D.C.
 57. Jun Liu, Xinwu Qian, Shuocheng Guo, Zihe Zhang, Chenxuan Yang, Steven Jones, 2023. Envisioning Shared Autonomous Vehicles for 374 Small and Medium-Sized Urban Areas in the United States: The Roles of Road Network and Regional Travel Demand - TRBAM-23-04292. Presented at The Transportation Research Board 102nd Annual Meeting, January 2023, Washington D.C.
 58. Zihe Zhang, Qifan Nie, Jun Liu, Xing Fu, Alex Hainen, Steven Jones, 2023. B723 - Real-Time Traffic Incident Detection on Freeways Using Crowdsourced Probe Vehicle Data: A Deep Learning Approach - TRBAM-23-04327. Presented at The Transportation Research Board 102nd Annual Meeting, January 2023, Washington D.C.
 59. Xing Fu, Weike Lu, Jun Liu, Alex Hainen, 2023. A Digital Twin Traffic Simulation Tool for Network-Wide, Real-Time Traffic Monitoring and Management - TRBAM-23-04288. Presented at The Transportation Research Board 102nd Annual Meeting, January 2023, Washington D.C.
 60. Cailis Bullard, Emmanuel Kofi Adanu, Jun Liu, Steven Jones, 2023. B656 - Crash Severity Analysis of Single-Vehicle Rollover Crashes in Namibia: A Mixed Logit with Heterogeneity in Means and Variances Approach - TRBAM-23-03732. Presented at The Transportation Research Board 102nd Annual Meeting, January 2023, Washington D.C.
 61. Jun Liu, Ningzhe Xu, Yangming Shi, Timothy Barnett, Steven Jones, 2023. B530 - Are First Responders Prepared for Electric Vehicle Fires?: A National Survey - TRBAM-23-04281. Presented at The Transportation Research Board 102nd Annual Meeting, January 2023, Washington D.C.
 62. Praveena Penmetsa, Chenxuan Yang, Jun Liu, Timothy Barnett, Leon Villavicencio, Lindsay Arnold, 2023. B541 - Incident Response Personnel's Compliance and Non-Compliance to Recommended Safety Countermeasures and Protocols - TRBAM-23-04406. Presented at The Transportation Research Board 102nd Annual Meeting, January 2023, Washington D.C.
 63. Chenxuan Yang, Jun Liu, Xiaobing Li, Timothy Barnett, 2023. B540 - Analysis of First Responder-Involved Traffic Incidents by Mining News Reports - TRBAM-23-04261. Presented at The Transportation Research Board 102nd Annual Meeting, January 2023, Washington D.C.

64. Chenxuan Yang, Jun Liu, Timothy Barnett, Praveena Penmetsa, 2023. B542 - The Relationship Between Traffic Incident Responders Safety Experience and Countermeasure Adoption: A Machine Learning Study Based on the National Survey - TRBAM-23-04349. Presented at The Transportation Research Board 102nd Annual Meeting, January 2023, Washington D.C.
65. Chenxuan Yang, Jun Liu, Sophie Menner, Xinwu Qian, Steven Jones, 2023. B650 - A Preliminary Look at the Impacts of Urban Air Mobility on Local Accessibility in 367 Small Urbanized Areas in the United States - TRBAM-23-04254. Presented at The Transportation Research Board 102nd Annual Meeting, January 2023, Washington D.C.
66. Sophie Menner, Jun Liu, Chenxuan Yang, Steven Jones, 2023. A273 - Linking Ride-hailing Behaviors and Interest in Shared Autonomous Vehicles: A Machine Learning Supported Path Analysis on Travel Survey - TRBAM-23-04300. Presented at The Transportation Research Board 102nd Annual Meeting, January 2023, Washington D.C.
67. Ningzhe Xu, Qifan Nie, Jun Liu, Steven Jones, 2023. A310 - Linking Short- and Long-Term Impacts of the COVID-19 Pandemic on Travel Behavior in Alabama: A Machine Learning Supported Path Analysis - TRBAM-23-04303. Presented at The Transportation Research Board 102nd Annual Meeting, January 2023, Washington D.C.
68. Jun Liu, Ningzhe Xu, Yangming Shi, Mizanur Rahman, Timothy Barnett, Steven Jones, 2023. B560 - Do First Responders Trust Connected and Automated Vehicles?: A National Survey - TRBAM-23-04287. Presented at The Transportation Research Board 102nd Annual Meeting, January 2023, Washington D.C.
69. Chenxuan Yang, Jun Liu, Cong Chen, Steven Jones, 2023. B686 - Revisiting the Roles of Speeds in Traffic Crashes: A Geospatial Modeling Study - TRBAM-23-04333. Presented at The Transportation Research Board 102nd Annual Meeting, January 2023, Washington D.C.
70. Md Musfiqur Rahman Bhuiya, Jun Liu, Steven Jones, Qifan Nie, 2023. The Role of the Built Environment in Traffic Signal and Stop Sign Violation Crashes: A Hierarchical Modeling Approach - TRBAM-23-03072. Presented at The Transportation Research Board 102nd Annual Meeting, January 2023, Washington D.C.
71. Sunday Okafor, Emmanuel Kofi Adanu, Jun Liu, Steven Jones, 2023. B680 - Behavioral Pathway Analysis of Pedestrian Injury Severity in Pedestrian Motor Vehicle Crashes - TRBAM-23-01415. Presented at The Transportation Research Board 102nd Annual Meeting, January 2023, Washington D.C.
72. Md Musfiqur Rahman Bhuiya, Jun Liu, Md Musleh Uddin Hasan, Steven Jones, 2023. B541 - Factors Influencing Poor Accessibility of Persons with Disability in Bangladesh: Insights from Key Informant Interviews - TRBAM-23-03245. Presented at The Transportation Research Board 102nd Annual Meeting, January 2023, Washington D.C.
73. Xiwen Lou, Guojing Hu, Jun Liu, Weike Lu, Wenjuan E, Qifan Nie, 2023. B607 - Quantifying the Network-Wide Traffic Efficiency Safety Relationship: A Case Study of Evaluating Mixed Urban Traffic Flows with Human-Driven and Connected and Automated Vehicles - TRBAM-23-01598. Presented at The Transportation Research Board 102nd Annual Meeting, January 2023, Washington D.C.
74. Praveena Penmetsa, Chenxuan Yang, Jun Liu, Timothy Barnett, Xiaobing Li, 2023. B675 - Incident Response Personnel and Countermeasures Adoption: Lessons Learned from

- Focus Group Interviews - TRBAM-23-02154. Presented at The Transportation Research Board 102nd Annual Meeting, January 2023, Washington D.C.
75. Xing Fu, Jun Liu, Zhitong Huang, Alex Hainen, Asad Khattak, 2023. A262 - Long Short-Term Memory Based Lane Change Prediction Using Waymo Open Motion Data Set: The Role of Vehicle Operating Space - TRBAM-23-04322. Presented at The Transportation Research Board 102nd Annual Meeting, January 2023, Washington D.C.
 76. Jun Liu, Xing Fu, Zihe Zhang, Chenxuan Yang, Qifan Nie, Steven Jones, 2022. Graph properties of road networks and vehicle miles traveled: A study of 486 urbanized areas in the United States - TRBAM-22-04143, Presented at The Transportation Research Board 101st Annual Meeting, 2022.
 77. William Agyemang, Emmanuel Kofi Adanu, Jun Liu, Steven Jones, 2022. A Latent Class Analysis of Factors Associated with Injury Outcomes of Pedestrian Crashes on Inter-Urban Highways in Ghana - TRBAM-22-04196, Presented at The Transportation Research Board 101st Annual Meeting, 2022.
 78. Weike Lu, Jun Liu, Xing Fu, Jidong Yang, Steven Jones, 2022. Integrating machine learning into path analysis for quantifying behavioral pathways in bicycle-motor vehicle crashes - TRBAM-22-04126, Presented at The Transportation Research Board 101st Annual Meeting, 2022.
 79. Chenxuan Yang, Jun Liu, Zihe Zhang, Steven Jones, 2022. Bored Driving and Crash Environments: A Machine Learning Approach - TRBAM-22-03887, Presented at The Transportation Research Board 101st Annual Meeting, 2022.
 80. Zihe Zhang, Qifan Nie, Jun Liu, Alex Hainen, Naima Islam, Chenxuan Yang, 2022. Machine Learning Based Real-Time Prediction of Freeway Crash Risk Using Crowdsourced Probe Vehicle Data - TRBAM-22-03905, Presented at The Transportation Research Board 101st Annual Meeting, 2022.
 81. Xing Fu, Jun Liu, Steven Jones, Timothy Barnett, Asad J. Khattak, 2022. From the Past to the Future: Modeling the Temporal Instability of Safety Performance Functions - TRBAM-22-03922, Presented at The Transportation Research Board 101st Annual Meeting, 2022.
 82. Xing Fu, Jun Liu, Alex Hainen, Steven Jones, Asad J. Khattak, 2022. A Deep Clustering Framework to Characterize Road Environments based on Street View Imagery - TRBAM-22-04042, Presented at The Transportation Research Board 101st Annual Meeting, 2022.
 83. Zihe Zhang, Jun Liu, Xiaobing Li, Asad J. Khattak, 2021. Do Larger Sample Sizes Increase the Reliability of Traffic Incident Duration Models? A Case Study of East Tennessee Incidents, TRBAM-21-02968, Presented at The Transportation Research Board 100th Annual Meeting, 2021.
 84. Weike Lu, Jun Liu, Guojing Hu, Allen Parrish, Alexander Hainen, 2021. A Pure Linear Programming Approach to Estimate the Macroscopic Fundamental Diagrams of Urban Networks, TRBAM-21-03269, Presented at The Transportation Research Board 100th Annual Meeting, 2021.
 85. Xing Fu, Jun Liu, Alexander Hainen, Asad Khattak, 2021. Qualifying the Driving Environment Dynamics from the View of Autonomous Vehicles (AVs): Inspiration for Qualitatively Defining Operational Design Domains (ODDs), TRBAM-21-03001, Presented at The Transportation Research Board 100th Annual Meeting, 2021.

86. Jun Liu, Kara Kockelman, 2021. Preparing Data For Microsimulation Of Smart Transport Systems: A Tool For Exploiting Existing Travel Model Results And Open-Source Data, TRBAM-21-01451, Presented at The Transportation Research Board 100th Annual Meeting, 2021.
87. Xiaobing Li, Jun Liu, Qifan Nie, Xing Fu, Shashi Nambisan, Asad Khattak, 2021. The Role of Truckers' Behaviors in Traffic Crashes: An Integrated Spatio-temporal Injury Severity Analysis, TRBAM-21-00399, Presented at The Transportation Research Board 100th Annual Meeting, 2021.
88. Xiaobing Li, Jun Liu, Chenxuan Yang, Timothy Barnett, 2021. Context-based Crash Modification Factors for Medians on Rural Four-Lane Roadways: A Bayesian Approach, TRBAM-21-00190, Presented at The Transportation Research Board 100th Annual Meeting, 2021.
89. Zihe Zhang, Xiaobing Li, Jun Liu, Xing Fu, Chenxuan Yang, Steven Jones, 2021. Localized Safety Performance Functions for Rural 3-Leg Stop-Controlled Intersections in Alabama, TRBAM-21-03672, Presented at The Transportation Research Board 100th Annual Meeting, 2021.
90. Xiaobing Li, Jun Liu, Zihe Zhang, Allen Parrish, 2021. A Spatiotemporal Analysis of Motorcyclist Injury Severity: Implications from 20 Years' Traffic Crashes in Pennsylvania, TRBAM-21-00061, Presented at The Transportation Research Board 100th Annual Meeting, 2021.
91. Zihe Zhang, Jun Liu, Qifan Nie, Steven Jones, 2021. Tracking a Shared Low-Speed Light-Weight Autonomous Mobility (SLLAM) System on Continuous Pedestrian Access Routes: A case study in Tuscaloosa, Alabama, TRBAM-21-03649, Presented at The Transportation Research Board 100th Annual Meeting, 2021.
92. Qinglin Hu, Xiaobing Li, Jun Liu, 2021. A Low-Cost Approach to Identify Hazard Curvature for Local Road Networks Using Open-Source Data, TRBAM-21-00299, Presented at The Transportation Research Board 100th Annual Meeting, 2021.
93. Xiaobing Li, Jun Liu, 2021. Spatiotemporal Instability in Injury Severity Analysis of Red-light Running Crashes at Signalized Intersections, TRBAM-21-00151, Presented at The Transportation Research Board 100th Annual Meeting, 2021.
94. Xiaobing Li, Praveena Penmetsa, Jun Liu, Alexander Hainen, Shashi Nambisan, 2021. Severity of Emergency Natural Gas Distribution Pipeline Incidents: Application of An Integrated Spatiotemporal Approach Fused with Text Mining, TRBAM-21-00097, Presented at The Transportation Research Board 100th Annual Meeting, 2021.
95. Qifan Nie, Zihe Zhang, Jun Liu, Steven Jones, 2021. Shared Autonomous Vehicles for Small Urban Areas: Agent-based Simulation, TRBAM-21-03607, Presented at The Transportation Research Board 100th Annual Meeting, 2021.
96. Xing Fu, Qifan Nie, Jun Liu, Steven Jones, 2021. How Do College Students Perceive Future Shared Mobility with Autonomous Vehicles? A Survey of The University of Alabama Students, TRBAM-21-02969, Presented at The Transportation Research Board 100th Annual Meeting, 2021.
97. Chenxuan Yang, Weike Lu, Jun Liu, Ismael Jones, 2021. Planning Airways for Urban Air Mobility in Small Cities: A Case Study of Tuscaloosa, Alabama, TRBAM-21-02971, Presented at The Transportation Research Board 100th Annual Meeting, 2021.

98. Weike Lu, Xiaobing Li, Jun Liu, Steven Jones, Allen Parrish, 2021. Survey of Surveys (SoS) - Mapping the Landscape of Travel-Related Surveys in COVID-19, TRBAM-21-03270, Presented at The Transportation Research Board 100th Annual Meeting, 2021.
99. Fu, Xing, Nie, Qifan, Liu, Jun, Khattak, Asad, Hainen, Alexander Michael, Nambisan, Shashi, The Transportation Research Board 99th Annual Meeting, National Academies, Washington, D.C., 2020, "Constructing Spatiotemporal Driving Volatility Profiles for Connected and Automated Vehicles in Existing Highway Networks," Transportation Research Board, Washington, DC, United States. (January 2020).
100. Lu, Weike, Liu, Jun, Mao, Jiannan, Hu, Guojing, Gao, Chuqiao, Liu, Lan, The Transportation Research Board 99th Annual Meeting, National Academies, Washington, D.C., 2020, "A Macroscopic Fundamental Diagram Approach to Evaluating Performance of Regional Traffic Controls," Transportation Research Board, Washington, DC, United States. (January 2020).
101. Nie, Qifan, Fu, Xing, Li, Xiaobing, Liu, Jun, The Transportation Research Board 99th Annual Meeting, National Academies, Washington, D.C., 2020, "Are Uninsured Drivers Less Likely to Request Emergency Medical Services After a Crash?," Transportation Research Board, Washington, DC, United States. (January 2020).
102. Li, Xiaobing, Liu, Jun, Penmetsa, Praveena, Nie, Qifan, Nambisan, Shashi, Hainen, Alex, , The Transportation Research Board 99th Annual Meeting, National Academies, Washington, D.C., 2020, "A Mixture of Text Mining and Random Parameter Approach to Understanding Contributing Factors Associated with Incident Responder Safety," Transportation Research Board, Washington, DC, United States. (January 2020).
103. Adanu, Emmanuel, Liu, Jun, McNamara, Margaret, Penmetsa, Praveena, Lidbe, Abhay, Li, Xiaobing, Hainen, Alexander Michael, The Transportation Research Board 99th Annual Meeting, National Academies, Washington, D.C., 2020, "Has the Younger Population's Vehicle Availability Changed Over the Years? - a Comparative Analysis of the Recent National Household Travel Surveys Transportation Research Board," Transportation Research Board, Washington, DC, United States. (January 2020).
104. Li, Xiaobing, Liu, Jun, Khattak, Asad, Nambisan, Shashi, The Transportation Research Board 99th Annual Meeting, National Academies, Washington, D.C., 2020, "Sequential Prediction for Large-Scale Traffic Incident Duration: Application and Comparison of Survival Models," Transportation Research Board, Washington, DC, United States. (January 2020).
105. Liu, J., A. Heinen & S. Nambisan. Pedestrian injury severity in motor vehicle crashes: An integrated spatio-temporal modeling approach. TRB Paper # 19-01140. Presentation at *The Transportation Research Board 98th Annual Meeting*, National Academies, Washington, D.C., 2019.
106. Liu, J. & S. Jones. Challenging Human Driver Taxis with Shared Autonomous Vehicles: A Case Study of Chicago. TRB Paper # 19-00752. Presentation at *The Transportation Research Board 98th Annual Meeting*, National Academies, Washington, D.C., 2019. *The work was also presented in *The IRF Global R2T Conference* in Las Vegas, NV, November 2018.
107. Liu, J. & S. Jones. Behavioral pathways in bicycle-motor vehicle crashes: From contributing factors, pre-crash actions, to injury severities. TRB Paper # 19-00598.

- Presentation at *The Transportation Research Board 98th Annual Meeting*, National Academies, Washington, D.C., 2019. *The work was also presented in *The IRF Global R2T Conference* in Las Vegas, NV, November 2018.
- 108.Liu, J. & A. Khattak. An Integrated Spatio-Temporal Approach to Examine the Consequences of Driving under the Influence (DUI) in Crashes. TRB Paper # 19-00935. Presentation at *The Transportation Research Board 98th Annual Meeting*, National Academies, Washington, D.C., 2019.
- 109.Liu, J., A. Khattak, J. Ma, & Z. Ling. Examining non-stationary correlates of bicyclist injury severity in traffic crashes: A spatial approach for geo-referenced crash data. TRB Paper # 19-01147. Presentation at *The Transportation Research Board 98th Annual Meeting*, National Academies, Washington, D.C., 2019.
- 110.Yang, H., G. Zai & J. Liu. Is the front passenger seat always the “death seat”? An application of hierarchical ordered probit model for occupant injury severity. TRB Paper # 19-00944. Presentation at *The Transportation Research Board 98th Annual Meeting*, National Academies, Washington, D.C., 2019.
- 111.Liu, J. & A. Khattak. Mapping Location-Based Driving Volatility for Connected and Automated Vehicles. TRB Paper # 18-00825. Presented at *The Transportation Research Board 97th Annual Meeting*, National Academies, Washington, D.C., 2018.
- 112.Wali, B., A. Khattak, D. Greene & J. Liu. Fuel Economy Gaps Within & Across Garages: Exploring Variations and Heterogeneity. TRB Paper # 18-00063. Presented at *The Transportation Research Board 97th Annual Meeting*, National Academies, Washington, D.C., 2018.
- 113.Liu, J. A. Khattak, C. Chen, D. Wan, J. Ma & J. Hu. Revisiting Hit-and-Run Crashes: A Geospatial Method. TRB Paper # 18-03009. Presented at *The Transportation Research Board 97th Annual Meeting*, National Academies, Washington, D.C., 2018.
- 114.Wali, B., A. Khattak, D. Greene & J. Liu. Analyzing within Garage Fuel Economy Gaps to Support Vehicle Purchasing Decisions – A Copula Based Approach. Presented at *The Transportation Research Board 97th Annual Meeting*, National Academies, Washington, D.C., 2018.
- 115.Wan, D., C. Kamga & J. Liu. Bicyclist-involved Crashes on Roadway Segments in New York City: A Spatial Analysis of Injury Severity. TRB Paper # 18-02980. Presented at *The Transportation Research Board 97th Annual Meeting*, National Academies, Washington, D.C., 2018.
- 116.Zhang, X., J. Ma, B. Smith & J. Liu. Operational Performance Evaluation of the Managed Lane Strategy for Early Deployment of Cooperative Adaptive Cruise Control. TRB Paper # 18-06287. Presented at *The Transportation Research Board 97th Annual Meeting*, National Academies, Washington, D.C., 2018.
- 117.Wan, D., C. Kamga & J. Liu. Injury Severity of Bicyclist-Involved Crashes at Intersections: A Comparative Study in New York City. TRB Paper # 18-02988. Presented at *The Transportation Research Board 97th Annual Meeting*, National Academies, Washington, D.C., 2018.
- 118.Liu, J., K. Kockelman, P. Boesch & F. Ciari. Tracking a System of Shared Autonomous Vehicles across the Austin, Texas Network using Agent-Based Simulation. TRB Paper #

- 17-00469. Presented at *The Transportation Research Board 96th Annual Meeting*, National Academies, Washington, D.C., 2017.
- 119.Liu, J., A. Khattak & B. Wali. Do Safety Performance Functions Vary Across Space? Application of Geographically Weighted Regressions. TRB Paper # 17-00237. Presented at *The Transportation Research Board 96th Annual Meeting*, National Academies, Washington, D.C., 2017.
- 120.Khattak, A., B. Wali & J. Liu. A Note on Heterogeneity Assessment of Incident Durations: Comparison of Random Parameter and Quantile Regressions. TRB Paper # 17-00236. Presented at *The Transportation Research Board 96th Annual Meeting*, National Academies, Washington, D.C., 2017.
- 121.Liu, J., K. Kockelman & A. Nichols. Anticipating the Emissions Impacts of Smoother Driving by Connected and Autonomous Vehicles, Using the MOVES Model. Presented at *The Transportation Research Board 96th Annual Meeting*, National Academies, Washington, D.C., 2017.
- 122.Boakye, K., A. Khattak, J. Liu & S. Nambisan. How Smartphone and Non-Smartphone Users Access and Use Traveler Information Systems. TRB Paper # 17-00698. Presented at *The Transportation Research Board 96th Annual Meeting*, National Academies, Washington, D.C., 2017.
- 123.Zhang, M., A. Khattak, J. Liu & D. Clarke. A Comparative Study of Rail-Pedestrian and Bicyclist Trespassing Crash Injury Severity at Highway-Rail Grade Crossings and Non-Crossings. TRB Paper # 17-00252. Presented at *The Transportation Research Board 96th Annual Meeting*, National Academies, Washington, D.C., 2017.
- 124.Liu, J, A. Khattak & S. Richards. Geo-Spatial Modeling of Motorist Gate-violation Behaviors at Highway-Rail Grade Crossings. TRB Paper # 17-02623. Presented at *The Transportation Research Board 96th Annual Meeting*, National Academies, Washington, D.C., 2017.
- 125.Rios-Torres, J., J. Liu & A. Khattak. Personal Fuel Economy in Conventional and Hybrid Electric Vehicles: Integrating Driving Cycle Predictions with Power Distribution Optimization. TRB Paper # 17-04692. Presented at *The Transportation Research Board 96th Annual Meeting*, National Academies, Washington, D.C., 2017.
- 126.Loeb, B., K. Kockelman & J. Liu. Shared Autonomous Electric Vehicle (SAEV) Operations across the Austin, Texas Network with a Focus on Charging Infrastructure Decisions, TRB Paper # 17-01151. Presented at *The Transportation Research Board 96th Annual Meeting*, National Academies, Washington, D.C., 2017.
- 127.Liu, J. & A. Khattak & M. Zhang. What Role do Pre-crash Driver Actions Play in Work Zone Crashes? Untangling Hierarchies in Crash Data, TRB Paper # 16-1587. Presented at *The Transportation Research Board 95th Annual Meeting*, National Academies, Washington, D.C., 2016.
- 128.Liu, J. & A. Khattak. Delivering Improved Alerts, Warnings, and Control Assistance Using Basic Safety Messages Transmitted between Connected Vehicles. TRB Paper # 16-0195. Presented at *The Transportation Research Board 95th Annual Meeting*, National Academies, Washington, D.C., 2016.
- 129.Liu, J. & A. Khattak & M. Zhang. Structuring and Integrating Data in Metropolitan Regions to Explore Multi-Level Links between Driving Volatility and Correlates, TRB Paper # 16-

0194. Presented at *The Transportation Research Board 95th Annual Meeting*, Washington, D.C., 2016.
130. Greene D., Liu, J. A. Khattak. How does On-Road Fuel Economy Vary with Vehicle Cumulative Mileage and Daily Use? TRB Paper # 16-1586. Presented at *The Transportation Research Board 95th Annual Meeting*, National Academies, Washington, D.C., 2016.
131. Khattak, A., J. Liu, X. Li & M. Ng. Modeling Traffic Incident Duration Using Quantile Regression. TRB Paper # 16-4235. Presented at *The Transportation Research Board 95th Annual Meeting*, National Academies, Washington, D.C., 2016.
132. Greene, D., A. Khattak, J. Liu, X. Wang, J. Hopson & R. Goeltz. Is there Evidence for a Gap between On-Road and Test Cycle Fuel Economy? TRB Paper # 16-1579. Presented at *The Transportation Research Board 95th Annual Meeting*, National Academies, Washington, D.C., 2016.
133. Wan, D., C. Kamga, J. Liu, A. Sugiura & E. Beaton. A Comparative Study of Passenger Satisfaction with Bus Rapid Transit with and without Awareness of Travel Information. TRB Paper # 16-2895. Presented at *The Transportation Research Board 95th Annual Meeting*, National Academies, Washington, D.C., 2016.
134. Liu, J., A. Khattak & L. Han. How Much Information is Lost When Sampling Driving Behavior Data? TRB Paper # 15-0968. Presented at *The Transportation Research Board 94th Annual Meeting*, National Academies, Washington, D.C., 2015.
135. Wang X., J. Liu & A. Khattak. Generating Fuel Economy Information to Support Cost Effective Vehicle Choices: Comparing Standard and Customized Driving Cycles. TRB Paper # 15-4548. Presented at *The Transportation Research Board 94th Annual Meeting*, National Academies, Washington, D.C., 2015.
136. Khattak A., J. Liu & X. Wang. Supporting Instantaneous Driving Decisions through Trajectory Data. TRB Paper # 15-1345. Presented at *The Transportation Research Board 94th Annual Meeting*, National Academies, Washington, D.C., 2015.
137. Liu, J., A. Khattak & X. Wang. Creating Indices for How People Drive in a Region: A Comparative Study of Driving Performance. TRB Paper # 15-0966. Presented at *The Transportation Research Board 94th Annual Meeting*, National Academies, Washington, D.C., 2015.
138. Liu, J., A. Khattak, S. Richards & S. Nambisan. What are the Differences in Driver Injury Outcomes at Highway-Rail Grade Crossings? The Role of Passive and Active Controls. TRB Paper # 15-0959. Presented at *The Transportation Research Board 94th Annual Meeting*, National Academies, Washington, D.C., 2015.
139. Wang X., A. Khattak, J. Liu, & D. Clarke. Non-crossing Rail-Trespassing Crashes in the Past Decade: A Spatial Approach to Analysis of Injury Severity. TRB Paper # 15-0955. Presented at *The Transportation Research Board 94th Annual Meeting*, National Academies, Washington, D.C., 2015
140. Bartnik B., J. Liu, S. Richards, & A. Khattak. Driver behavior at railway-highway grade crossings with passive traffic controls: A driving simulator study. TRB Paper # 14-2110. Presented at *The Transportation Research Board 93rd Annual Meeting*, National Academies, Washington, D.C., 2014.

141. Liu, J., B. Bartnik S. Richards, & A. Khattak. How are driver characteristics related to safety at railroad-crossings? The case of passive railroad grade crossings. TRB Paper # 14-4413. Presented at *The Transportation Research Board 93rd Annual Meeting*, National Academies, Washington, D.C., 2014.
142. Wang, X., A. Khattak, G. Amoli, S. Son, & J. Liu, What is the Level of Volatility in Instantaneous Driving Decisions? TRB Paper # 14-2780, Presented at *The Transportation Research Board 93rd Annual Meeting*, National Academies, Washington, D.C., 2014.

Other Refereed/Non-refereed Conference Papers & Presentations (46)

143. Sanni, T., Liu, Z., Lee, J., Song, W., Liu, J. and Shi, Y., 2024. Investigating the Impacts of Different Warning Modalities on Individual's Risk Perception and Response Behaviors Through a Virtual Reality Experiment. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* (p. 10711813241260336). Sage CA: Los Angeles, CA: SAGE Publications.
144. Ningzhe Xu, Yiming Xu, Jun Liu, Junfeng Jiao, 2024. How Does EV Crash Differ from ICEV Crash: A Case Study in Pennsylvania. Presented at the 6th Bridge Transportation Researcher (BTR 6) Conference, Online, August 2024.
145. Zihe Zhang, Jun Liu, Javier Pena-Bastidas, Steven Jones, 2024. Charging Infrastructure Assessment for Shared Autonomous Electric Vehicles in 374 Small and Medium-Sized Urban Areas: An Agent-Based Simulation Approach. Presented at the 6th Bridge Transportation Researcher (BTR 6) Conference, Online, August 2024.
146. Javier Pena-Bastidas, Jun Liu, Zihe Zhang, Steven Jones, 2024. Enabling Dynamic Ride-Sharing in Shared Autonomous Vehicle Fleets: A Study of Over 200 Small & Medium-Sized Urban Areas. Presented at the 6th Bridge Transportation Researcher (BTR 6) Conference, Online, August 2024.
147. Javier Pena Bastidas, Jun Liu & Steven Jones, 2024. Exploring the Role of Emerging Mobility Solutions in Shaping Care-Seeking Behaviors in Rural Communities. Presented at the 2024 Alabama Rural Health Conference, Montgomery, AL, March 2024.
148. Javier Pena Bastidas, Zihe Zhang, Jun Liu & Steven Jones, 2024. Creating Synthetic Data to Support Advanced Mobility Modeling for Small and Medium Sized Urban Areas. Presented at the 2024 ASCE International Conference on Transportation & Development, Atlanta, GA, June 2024.
149. Ziming Liu, Tolu Sanni, Yangming Shi, Jun Liu, 2024. A Multimodality VR Training System for Future Electrical Vehicle Emergency Responses. Conference: Construction Research Congress 2024. DOI: 10.1061/9780784485262.132
150. Javier Pena-Bastidas (UA), Ningzhe Xu (UA), Jun Liu (UA), Steven Jones (UA), and Reg Souleyrette (UK), 2024. Spatial Disparities in Safety Benefits of Adopting Automated Vehicle Technologies Across Rural Communities. Presented at the Joint University Transportation Center (UTC) Symposium, Greensboro, NC April 17-18, 2024.
151. Jun Liu, 2024. Building a smart and connected rural community for improved healthcare access through the deployment of integrated mobility solutions. 2024 Smart and Connected Communities Principal Investigators' Meeting. February 2024.
152. Jun Liu, Ningzhe Xu, Yangming Shi, Mizanur Rahman, Steven Jones, 2023. Do First Responders Trust Connected and Automated Vehicles (CAVs)? A National Survey.

- Presented at the 5th Bridge Transportation Researcher (BTR 5) Conference, Online, August 2023.
153. Jun Liu, Xinwu Qian, Shuocheng Guo, Zihe Zhang, Chenxuan Yang, Steven Jones, 2023. Envisioning Shared Autonomous Vehicles for 374 Small and Medium-Sized Urban Areas in the United States. Presented at the 5th Bridge Transportation Researcher (BTR 5) Conference, Online, August 2023.
 154. Riffat Islam, Steven Jones, Emmanuel Adanu, Jun Liu, 2023. Public Perception of Shared Autonomous Vehicle Usage during Tornado Events. ASCE International Conference on Transportation & Development, Austin, TX, June 2023.
 155. Javier Pena-Bastidas, Jun LIU, Steven Jones, 2023. Congestion impacts of non-motorized transport policies in Bogotá, Colombia. ASCE International Conference on Transportation & Development, Austin, TX, June 2023.
 156. Jun Liu, Xing Fu, Chenxuan Yang, Alex Hainen, 2023. Evaluating the Effectiveness of Vehicle-Mounted Variable Message Signs (VMS) in Protecting Roadside Incident and Service Personnel: A Deep Learning Study. ASCE International Conference on Transportation & Development, Austin, TX, June 2023.
 157. Rongshen Zhao, Jun Liu, Alex Hainen, Steven Jones, 2023. Mapping Location-Based Driving Volatility and Road Safety: A Study Using Large-Scale Crowdsourced Vehicle Movement Data. ASCE International Conference on Transportation & Development, Austin, TX, June 2023.
 158. Muhammad Sami Irfan, Mizanur Rahman, Abhay Lidbe, Jun Liu, Yangming Shi, 2023. Exploring the Perceptions of Students at Educational Institution Towards Different External Human Machine Interface Designs of Autonomous Vehicles. ASCE International Conference on Transportation & Development, Austin, TX, June 2023.
 159. Jun Liu, Ningzhe Xu, Yangming Shi, Mizanur Rahman, Steven Jones, 2023. Do First Responders Trust Connected and Automated Vehicles (CAVs)? A National Survey. ASCE International Conference on Transportation & Development, Austin, TX, June 2023.
 160. Ningzhe Xu, Jun Liu, Zihe Zhang, Steven Jones, 2023. Police injury severity in traffic crashes: A spatial analysis. ASCE International Conference on Transportation & Development, Austin, TX, June 2023.
 161. Chenxuan Yang, Sophie Menner, Jun Liu, Xinwu Qian, Steven Jones, 2022, A Graph-Theoretical Approach to Anticipating the Impacts of Urban Air Mobility (UAM) on Local Accessibility in 367 Small Urbanized Areas in the United States. 2022 Southeastern ITS Summit, Atlanta, GA, November 2022.
 162. Qifan Nie, Zihe Zhang, Jun Liu, Alex Hainen, 2022. Using machine learning to understand the correlates of spatio-temporal impacts of traffic incidents: A case study of Alabama freeways. 2022 Southeastern ITS Summit, Atlanta, GA, November 2022.
 163. Sharareh Biglari, Zihe Zhang, Emmanuel (Kofi) Adanu, Jun Liu, Steven Jones, 2022. A Study of Developed SPFs for Signalized Intersections in Alabama Using Crash Types and Severity. ITE Annual Meeting, New Orleans, LA, August 2022.
 164. Zihe Zhang, Jun Liu, 2022. A Shared Low-Speed Lightweight Autonomous Mobility System (SLLAM) for Short-Distance Trips: Simulating Mode Choice Decisions. ASCE International Conference on Transportation & Development, Seattle, WA, June 2022. The word was also presented in ITE Annual Meeting, New Orleans, LA, August 2022.

165. Xing Fu, Jun Liu, Alex Hainen, Steven Jones, Asad J. Khattak, 2022. A Deep Clustering Framework to Characterize Road Environments based on Street View Imagery. Presented in the 4th Bridge Transportation Researchers Conference, Online, August 2022. (Virtual)
166. Xing Fu, Jun Liu, Ziheng Zhang, Qifan Nie & Steven Jones. Back to the Future: Modeling the Temporal Instability of Safety Performance Functions. Presented in the 3rd Bridge Transportation Researchers Conference, Online, August 2021. (Virtual)
167. Chenxuan Yang, Ziheng Zhang, Xiaobing Li, Qifan Nie, Jun Liu & Steven Jones. Inattention & distraction in rural high-speed multilane highway crashes: An interpretable tree-based machine learning approach. Presented in the 3rd Bridge Transportation Researchers Conference, Online, August 2021. (Virtual)
168. Xing Fu, Jun Liu, Alex Hainen, Asad Khattak, 2020. Constructing spatiotemporal driving volatility profiles for connected and automated vehicles in existing highway networks, The Bridging Transportation Researchers (BTR) Conference 2020, August 11 – 12, 2020. (Virtual)
169. Nie, Q., X. Fu, X. Li, Q. Hu, J. Liu, S. Jones, 2020. Relating Car Availability to Regional Walkability -A Hierarchical Investigation on National Databases, The Bridging Transportation Researchers (BTR) Conference 2020, August 11 – 12, 2020. (Virtual)
170. Nie, Qifan, Fu, Xing, Li, Xiaobing, Liu, Jun, The IRF Global R2T Conference, "Are Uninsured Drivers Less Likely to Request Emergency Medical Services After a Crash?," International Road Federation, Las Vegas, NV. (November 2019).
171. Fu, Xing, Liu, Jun, Hainen, Alexander Michael, Khattak, Asad, The IRF Global R2T Conference, "Identifying Potential On-road Hazards in the Existing Transportation Network for Connected and Automated Vehicles Based on Spatiotemporal Driving Volatility," International Road Federation, Las Vegas, NV. (November 2019).
172. Fu, Xing, Nie, Qifan, Li, Xiaobing, Liu, Jun, The IRF Global R2T Conference, "The Role of Built Environment in Emergency Medical Services Delays in Responding to Traffic Crashes," International Road Federation, Las Vegas, NV. (November 2019).
173. Liu, Jun, Khattak, Asad, Li, Xiaobing, Fu, Xing, The IRF Global R2T Conference, "Who are the early adopters of alternative fuel and hybrid vehicles? Examining the spatially varying vehicle ownership across the United States," International Road Federation, Las Vegas, NV. (November 2019).
174. Li, Xiaobing, Liu, Jun, Khattak, Asad, Nambisan, Shashi, The IRF Global R2T Conference, "Why Occupant Protection Systems Don't Work in Multi-Fatality Traffic Crashes? A Study of Hierarchical Modeling," International Road Federation, Las Vegas, NV. (November 2019).
175. Fu, Xing, Liu, Jun, Li, Xiaobing, Jones, Steven, Khattak, Asad, The International Conference on Sustainable Development, "A systems approach to understanding walkability and non-auto travel," Sustainable Development Solutions Network, New York City, NY, United States. (September 2019).
176. Nie, Qifan, Fu, Xing, Liu, Jun, Li, Xiaobing, Jones, Steven L, The International Conference on Sustainable Development, "Relating Car Availability to Regional Walkability - A Hierarchical Investigation on National Databases," Sustainable Development Solutions Network, New York City, NY, United States. (September 2019).

177. Fu, X., J. Liu, A. Hainen, 2020. Extracting Operational Design Domain Metrics from Autonomous Driving Data, Automated Vehicles Symposium 2020, July 27-30, 2020. (Virtual)
178. The Transportation Research Board 103rd Annual Meeting Fu, X., Q. Nie, X., Li, J. Liu, S. Nambisan. Understanding the Role of Built Environment in Delayed EMS Response during Traffic Crashes, *Safe Systems Summit: Redefining Transportation Safety*, Durham, NC, April 23-24, 2019.
179. Nie, Q., X. Fu, X. Li, J. Liu, A. Graettinger. Are Uninsured Drivers Unlikely to Call Emergency Medical Services after Getting Injured in A Crash? A Comparative Study of Crashes with and without EMS Requests, *Safe Systems Summit: Redefining Transportation Safety*, Durham, NC, April 23-24, 2019.
180. Liu, J., K. Kockelman, P. Boesch & F. Ciari. Tracking a System of Shared Autonomous Vehicles across the Austin, Texas Network using Agent-Based Simulation. Presented at The 2016 Automated Vehicles Symposium, San Francisco, CA, July 19-21, 2016.
181. Liu, J., K. Kockelman & A. Nichols. Anticipating the Emissions Impacts of Autonomous Vehicles Using the MOVES Model. Presented at The 2016 Automated Vehicles Symposium, San Francisco, CA, July 19-21, 2016.
182. Khattak, A., B. Wali & J. Liu, Analysis of Incidents Durations: Estimation of Random Parameter and Quantile Regressions. Presented at The 23rd Intelligent Transportation Systems World Congress, Melbourne, Australia, October 10 ~14, 2016.
183. Liu, J. & A. Khattak. Improved Warning and Assistance Information from Connected Vehicle Basic Safety Messages, Presented at The 22nd Intelligent Transportation Systems World Congress, Bordeaux, France, 2015.
184. Liu, J., A. Khattak & S. Richards. What Are the Consequences of Drivers Trespassing Highway-Rail Grade Crossings Equipped with Gates? A Spatial Approach Integrated with Path Analysis, Presented at The 2015 Road Safety & Simulation International Conference, Orlando, FL, 2015.
185. Liu, J., A. Khattak & S. Richards. How Safe Are Narrow Lanes? Applications of Safety Models, Presented at The 2015 Road Safety & Simulation International Conference, Orlando, FL, 2015.
186. Liu, J., A. Khattak & M. Zhang, Exploring Links between Naturalistic Driving Behaviors and Various Factors in Hierarchies: A Study Integrating Multiple Data Sources, Presented at The 2015 Road Safety & Simulation International Conference, Orlando, FL, 2015.
187. Zhang, M., A. Khattak, J. Liu & D. Clarke, The Role of Rail-Trespassing Crashes at Highway-Rail Grade Crossings and Non-crossing Tracks? A Comparative Study on Injury Severity, Presented at The 2015 Road Safety & Simulation International Conference, Orlando, FL, 2015.
188. Liu, J., X. Wang & A. Khattak. Generating Real-Time Volatility information, Presented at The 21st Intelligent Transportation Systems World Congress, Detroit, MI, 2014

FUNDING

Funding Summary:

- **30** funded projects, Total: **\$21,778,650**, My Share: **\$4,721,379**.
 - *Including projects in the process of being awarded funding.*
- **PI** for **17** projects and **Co-PI** for **13** projects.
- Number of projects by funding agency:
 - NSF: **3**
 - NIH/CDC: **1**
 - US DOT: **6**
 - US DOE: **1**
 - NOAA: **1**
 - AAA Foundation: **2**
 - Alabama DOT: **8**
 - Georgia DOT: **4**
 - Other: **4**

Complete funding information is available upon request.

TEACHING & ADVISING

Teaching (Comprehensive teaching evaluation reports are available upon request)

- CE 350 – Introduction to Transportation Engineering Spring 2025
- CE 655 – Sustainable Transportation Spring 2025
- CE 454/554 – Urban Transportation Planning Fall 2024
- CE 350 – Introduction to Transportation Engineering Spring 2024
- CE 552 – Transportation Safety and Security Spring 2024
- CE 454/554 – Urban Transportation Planning Fall 2023
- CE 655 – Sustainable Transportation Spring 2023
 - Enrollment: 7, Evaluation: 4.83/5
- CE 350 – Introduction to Transportation Engineering Spring 2023
 - Enrollment: 27, Evaluation: 4.30/5
- CE 454/554 – Urban Transportation Planning Fall 2022
 - Enrollment: 29, Evaluation: 4.81/5
- CE 553 – Intelligent Transportation Systems Spring 2022
 - Enrollment: 8, Evaluation: 4.63/5
- CE 552 – Transportation Safety and Security Spring 2022
 - Enrollment: 6, Evaluation: 4.67/5
- CE 454/554 – Urban Transportation Planning Fall 2021
 - Enrollment: 41, Evaluation: 4.60/5
- CE 350 – Introduction to Transportation Engineering Spring 2021
 - Enrollment: 60, Evaluation: 4.65/5
- CE 454/554 – Urban Transportation Planning Fall 2020
 - Enrollment: 37, Evaluation: 4.36/5
- CE 350 – Introduction to Transportation Engineering Spring 2020
 - Enrollment: 53, Evaluation: 4.37/5
- CE 591 – Intelligent Transportation Systems Fall 2019
 - Enrollment: 10, Evaluation: 4.60/5
- CE 350 – Introduction to Transportation Engineering Spring 2019
 - Enrollment: 62, Evaluation: 3.97/5

Guest Lectures

- Spatial Modeling in Transportation Safety Research 04/01/2021
Transportation Safety Class at the University of Tennessee, Knoxville
- Spatial Modeling in Transportation Safety Research 02/12/2021
Transportation Safety System Class at Auburn University

Doctoral Dissertation Committee Chair (12)

- Mr. Yang Yu 2025 – date
- Mr. Handa Shi 2024 – date
- Mr. Xiao Zou 2024 – date
- Mr. Jiayi Kong 2024 – date
- Miss. Yanfang Su 2024 – date
- Mr. Javier Pena Bastidas 2022 – date

- Mr. Ningzhe Xu 2021 – date
- Dr. Tolu Sanni 2024 (completed)
 - Dissertation– *“The Role of Immersive Visualization Technologies for Natural Disaster Risk Communication”*
 - Current Employment: Assistant Professor (tenure-track), California State University, Fresno, CA
- Dr. Chenxuan Yang 2023 (completed)
 - Dissertation– *“Envisioning Urban Air Mobility in Small and Medium-sized Urban Areas in the United States”*
 - Current Employment: Traffic Engineer, AECOM, Birmingham, AL.
- Dr. Ziheng Zhang 2023 (completed)
 - Dissertation – *“A Shared Low-Speed Light-Weight Autonomous Mobility (SLLAM) System for Campus Environments”*
 - Lifesavers Traffic Safety Scholar (TSS) for the 2022 Lifesavers National Conference (\$1,000)
 - 4th place for the ACS10 Research Hot Topic Contest- Localizing Safety Performance Functions
 - Current Employment: Transportation Planner & Traffic Engineer, Volkert, Inc., Birmingham, AL.
- Dr. Xing Fu 2022 (completed)
 - Dissertation – *“An Exploratory Approach to Digitizing the Operational Environments for Connected and Automated Vehicles”*
 - Excellence in Dissertation Research Award (CCEE Department)
 - 2nd Place of Graduate Oral Talks in the 2021 University Research Symposium at the University of West Alabama.
 - Lifesavers Traffic Safety Scholar (TSS) for the 2022 Lifesavers National Conference (\$1,000)
 - Current Employment: Modeler, Discover Financial Services, Chicago, IL
- Dr. Qifan Nie 2020 (completed)
 - Dissertation – *“Preparing Small Urban Areas for Shared Mobility with Autonomous Vehicles: A Case Study of College Town”*
 - Current Employment: Chief Engineer, Hangzhou Polyful Advanced Material Ltd., Hangzhou, China

Doctoral Dissertation Committee Member (11)

- Mr. Nadan Cho (Dr. Hainen) 2024 (completed)
- Mr. Vamshi Chaitanya Animalla (Dr. Hainen) Ongoing
- Miss. Madusha Maha Gamage (Dr. Li - Geography) Ongoing
- Dr. Sunday Okafor (Dr. Jones) 2024 (completed)
- Dr. Hao Zhong (Dr. Liang - Construction) 2023 (completed)
- Dr. Sunday Okafor (Dr. Jones) 2024 (completed)
- Dr. Riffat Islam (Dr. Jones) 2023 (completed)
- Dr. Agyemang William (Dr. Jones) 2022 (completed)

- Dr. Juhno Song (Dr. Jones) 2021 (completed)
- Dr. Naima Islam (Dr. Hainen) 2021 (completed)
- Dr. Md Abu Sufian Talukder (Dr. Hainen) 2021 (completed)

Master's Thesis Committee Chair (3)

- Mr. Benjamin Barria Martinez (transferred) 2023 – 2024
Topic: Travel Demand Modeling
- Miss. Sophie Menner 2024 (completed)
Topic: Shared Autonomous Vehicles
- Mr. Stephen Poptic 2020 (completed)
Thesis – “*Dedicated Lanes for Connected and Automated Vehicles on Freeways: A Micro-simulation Study*”
Current Employment: Staff Structural Engineer/Assistant Project Manager, Burns & McDonnell, Chicago, IL

Master's Non-Thesis Committee Chair (2)

- Mr. Musfiq Bhuiya 2022 (completed)
Current Employment: PhD Student, UC Davis, CA.
- Mr. Tanner Carr 2020 (completed)
Current Employment: Project Manager, TTL, Inc., Birmingham, AL.

Postdoctoral Research Supervision (4)

- Dr. Zihe Zhang 2023 - 2024
Current Employment: Transportation Planner & Traffic Engineer, Volkert, Inc., Birmingham, AL.
- Dr. Qifan Nie 2020 - 2021
Current Employment: Chief Engineer, Hangzhou Polyful Advanced Material Ltd., Hangzhou, China
- Dr. Weike Lu 2019 - 2020
Current Employment: Associate Professor, Soochow University, Suzhou, China
- Dr. Xiaobing Li 2018 - 2020
Current Employment: Research Scientist Senior, Kentucky Transportation Center - University of Kentucky

Supervised Undergraduate Students for Research (11)

- Brandon Madden 2024 – date
- Joan White 2024 – date
- Jackson Field 2024 – date
- Carter Buchanan 2024 – date
- Sophie Menner 2021 – 2023
- Natalie Crisci 2022
- Josh Lambert 2020 – 2021

- Sawyer Griffy 2021
- Ismael Jones 2020
- Hannah Carter 2019
- Selina Rausch 2019

SERVICES

University of Alabama

- Member, Department Graduate Program Committee 2023 – date
- Faculty Senate Alternate, Faculty Senate 2022 – date
- Coordinator of Transportation Seminar Series 2022
- Member, ATI Transportation Executive Committee 2020
- Member, ATI Transportation Coordinating Council 2020
- Judge, Department Committee for Three-Minute Thesis (3MT) Competition 2019, 2020

Professional Membership

- Co-Chair, Transportation Safety Policy and Management 2024 - date
World Transportation Convention
- Co-Chair, Intelligent Transportation System Operation and Maintenance 2024 – date
World Transportation Convention
- Member of ACS20(1) Subcommittee on Analytical Methods (SAM). 2021 – date
Transportation Research Board, National Academies, Washington, D.C.
- Member/Friend of TRB Committee on Transportation Safety Management 2019 – date
Systems
Transportation Research Board, National Academies, Washington, D.C.
- Organizing Committee Member 2019 – 2021,
Bridging Transportation Researchers (BTR) Conference 2025
- Member of TRB Committee on Visualization in Transportation 2016 – 2019
Transportation Research Board, National Academies, Washington, D.C.
- Member of TRB Committee on Geospatial Data Acquisition Technologies 2016 – date
Transportation Research Board, National Academies, Washington, D.C.
- Member of Institute of Transportation Engineers (ITE) 2011 – date
President of ITE Student Chapter at University of Tennessee (2013-2014)
- Full Member of Sigma Xi -The Scientific Research Society 2016 – date
An International Honor Society of Science and Engineering

Grant/Proposal/Project Reviewer for Funding Agencies

- Panelist for NCHRP Project 20-102(22) - State and Local Impacts of Automated 2019 – 2023
Freight Transportation Systems
- Panelist for NSF Humans, Disasters and the Built Environment (HDBE) program 2021
- University of California at Los Angeles, Institute of Transportation Studies, 2017
Pacific Southwest Region Transportation Center - Regional University
Transportation Center for US Region 9 (Arizona, California, Hawai'i, Nevada,
and the Pacific Territories)
- Commonwealth of Virginia, Virginia Department of Transportation 2016 – 2018

Editorial Board and Services

- Paper Review Coordinator, TRB Committee on Transportation Safety Management Systems (ACS10) 2024 – date
- Paper Review Coordinator, TRB Committee on Artificial Intelligence and Advanced Computing (AED50) 2022 – date
- Managing Editor, *Journal of Intelligent Transportation Systems* 2019 – date
<https://www.tandfonline.com/toc/gits20/current>
- Handling Editor, *Transportation Research Record* (journal) 2019 – date
<https://journals.sagepub.com/home/trr>
- Editorial Board Member, *Accident Analysis & Prevention* (journal) 2023 – date
<https://www.sciencedirect.com/journal/accident-analysis-and-prevention>
- Editorial Board Member, *Journal of Safety Research* 2022 – date
<https://www.journals.elsevier.com/journal-of-safety-research>
- Lead Guest Editor, *Sustainability*, Special Issue - *Modeling Connected and Automated Vehicles (CAVs) for Sustainable and Intelligent Transportation Systems* 2021
- Area Editor, *The Joint COTA International Conference of Transportation Professionals* 2021 – 2023

Judging

- Judge for CUTC Student Awards 2021 – 2024
The Council of University Transportation Centers (CUTC)
- Lead Organizer (& Judge) for TRB ACS10 Hot Topic Contest 2021 – 2022
TRB ACS10 Committee on Transportation Safety Management Systems

Review Services

- Transportation Research Part A: Policy and Practice (Journal)
- Transportation Research Part C: Emerging Technologies (Journal)
- Transportation Research Part D: Transport and Environment (Journal)
- Transportation Research Part F: Traffic Psychology and Behaviour (Journal)
- IEEE Transactions on Intelligent Transportation Systems (Journal)
- Transportation (Journal)
- Accident Analysis & Prevention (Journal)
- International Journal of Sustainable Transportation
- Transport Policy (Journal)
- Journal of Intelligent Transportation Systems: Technology, Planning, and Operations
- SAE International Journal of Connected and Automated Vehicles
- ASCE Journal of Transportation Engineering, Part A: Systems
- Journal of Transportation Safety & Security
- Journal of Safety Research
- Geo-spatial Information Science (Journal)
- Traffic Injury Prevention (Journal)
- Transportmetrica A: Transport Science (Journal)
- Research in Transportation Economics (Journal)

- IEEE Sensors Journal
- Physica A: Statistical Mechanics and its Applications (Journal)
- Soft Computing (Journal)
- Journal of Traffic and Transportation Engineering
- Urban Rail Transit (Journal)
- Urban Studies
- Advances in Transportation Studies (Journal)
- ITS World Congress Annual Meeting
- ITS America's Annual Meeting
- COTA International Conference of Transportation Professionals
- ASCE International Conference on Transportation & Development
- Bridge Transportation Researcher Conference
- Transportation Research Board Annual Meetings:
 - Special Task Force on Climate Change and Energy
 - Standing Committee on Transportation Asset Management
 - Standing Committee on Transportation Issues in Major Cities
 - Standing Committee on Accessible Transportation and Mobility
 - Standing Committee on Statewide Transportation Data and Information Systems
 - Standing Committee on Urban Transportation Data and Information Systems
 - Standing Committee on Travel Survey Methods
 - Standing Committee on Information Systems and Technology
 - Standing Committee on Visualization in Transportation
 - Standing Committee on Traveler Behavior and Values
 - Standing Committee on Transportation Demand Forecasting
 - Standing Committee on Transportation and Air Quality
 - Standing Committee on Social and Economic Factors of Transportation
 - Standing Committee on Transportation and Sustainability
 - Standing Committee on Geospatial Data Acquisition Technologies
 - Standing Committee on Intelligent Transportation Systems
 - Standing Committee on Work Zone Traffic Control
 - Standing Committee on Transportation Safety Management
 - Standing Committee on Safety Data, Analysis and Evaluation
 - Standing Committee on Highway Safety Performance
 - Standing Committee on Vehicle User Characteristics
 - Standing Committee on User Information Systems

HONORS & AWARDS

-
- Excellence in Research & Innovation Award (Emerging Scholar) 2022
Department of Civil, Construction and Environmental Engineering, The University of Alabama
 - Outstanding Reviewer 2022
Transportation Research Part D
 - Nomination for AASHTO Research Advisory Committee (RAC) High Value Research 2021
Georgia Department of Transportation
 - Best Paper Award 2020
TRB Freeway Operations Committee – ACP20
 - Small Grants Program Award 2018
The University of Alabama
 - Best Reviewer of JTTE 2014-2016 2017
Journal of Traffic and Transportation Engineering (English Edition)
 - Winner of Distinguished Scientific Paper - Americas 2016
2016 Intelligent Transport Systems World Congress in Melbourne, Australia
 - First Place in Student Paper Competition 2015
Tennessee Section Institute of Transportation Engineers (TSITE)
 - Graduate Student Senate Travel Award, 2014 ITS World Congress, Detroit, MI. 2014
University of Tennessee, Knoxville
 - William L. Moore, Jr. Scholarship-First Place TSITE Student Scholarship 2014
Tennessee Section Institute of Transportation Engineers (TSITE)
 - Robert E. Stammer, Jr. Student Chapter Award 2014
Tennessee Section Institute of Transportation Engineers (TSITE)
 - Second Place in Student Paper Competition 2014
Tennessee Section Institute of Transportation Engineers (TSITE)
 - Third Place of 2013 Best ITE Student Chapter in Southern District 2014
Southern District of Institute of Transportation Engineers (SDITE)
 - Graduate Student Senate Travel Award, 2014 TRB, Washington, D.C. 2014
University of Tennessee, Knoxville
 - Third Place in Student Paper Competition 2013
Tennessee Section Institute of Transportation Engineers (TSITE)