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Harvey D. Spangler Professor, Department of Civil and Environmental Engineering
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Email: xli2485@wisc.edu; Phone: 608-890-0104
Google Scholar: https://scholar.google.com/citations?user=c_pXlGUAAAAJ&hl=en (Citations # 10715)
Research Group Website: https://catslab.engr.wisc.edu/

EDUCATION

Ph.D. **University of Illinois at Urbana-Champaign (UIUC)**
Civil and Environmental Engineering, Spring 2011
Dissertation: *Reliable Facility Location Design and Traffic Sensor Deployment under Probabilistic Disruptions*
Advisor: Professor Yanfeng Ouyang
GPA: 3.98/4.00

M.S. **University of Illinois at Urbana-Champaign**
Applied Mathematics, December 2010
GPA: 4.00/4.00

M.S. **University of Illinois at Urbana-Champaign**
Civil and Environmental Engineering, 2006-2007
GPA: 4.00/4.00

B.Eng. **Tsinghua University**, Beijing, China
Civil Engineering, 2006
Minor: Computer Engineering
Thesis: *Application of Image Recognition to Pedestrian Traffic*

APPOINTMENTS

- Director, Tribal and Rural Autonomous Vehicle for Efficiency, Livability and Safety (TRAVELS) Center, USDOT Rural Autonomous Vehicle Program for People Movement, January 2026 – present
- Founding Executive Director, Smart Highway Research Center (SHRC), University of Wisconsin-Madison, April 2025 – present
- Harvey D. Spangler Professor, Department of Civil & Environmental Engineering, University of Wisconsin-Madison, July 2024 – present
- Professor, Department of Civil and Environmental Engineering, University of Wisconsin-Madison, August 2022 – present
- Affiliate, Department of Electrical and Computer Engineering, University of Wisconsin-Madison, September 2022 – present
- Director, National Institute for Congestion Reduction (NICR), September 2020 – August 2022
    - NICR is one of the seven National University Transportation Centers Sponsored by US Department of Transportation. The consortium includes USF (lead), the University of California, Berkeley, Texas A&M University, and the University of Puerto Rico, Mayagüez. For more information, please refer to https://nicr.usf.edu/.
- Founder, Connected and Autonomous Transportation Systems (CATS) Lab, December 2018 – present

- CATS designed and assembled two L3 connected and automated vehicles (CAVs) and associated roadside units in-house. The facilities for the first time demonstrated the US Department of Transportation (USDOT) CARMA platform to the public. CATS also developed the algorithms for the first set of use cases (4 TSMO use cases) for the CARMA ecosystems. See for an introduction https://www.youtube.com/watch?v=Gq2trkadsnc

- Adjunct Professor, Department of Computer Science and Engineering, University of South Florida (USF), Spring 2022 – August 2022
- Associate Professor, Department of Civil and Environmental Engineering, University of South Florida (USF), August 2018 – August 2022
- Assistant Professor, Department of Civil and Environmental Engineering, University of South Florida (USF), August 2015 – August 2018
- Assistant Professor, Department of Civil and Environmental Engineering, Mississippi State University (MSU), January 2012 – August 2015
- Research Analyst, Champaign Simulation Center, Caterpillar Inc., Champaign IL, February - December 2011
- Graduate Research Assistant, Department of Civil and Environmental Engineering, University of Illinois at Urbana-Champaign, August 2006 – February 2011
- Graduate Teaching Assistant, Department of Civil and Environmental Engineering, University of Illinois at Urbana-Champaign, August 2008 – December 2010

LICENCES

- Professional Engineer, Wisconsin, #100171-6, July 2023 – present

HONORS AND AWARDS

- USDOT IDEA Challenge Stage 1 Winner, November 2025 (15 winners out of 448 submissions)
- 104th TRB Annual Meeting, Best Paper Award (ACH50), January 2025
- 104th TRB Annual Meeting, Best Paper Award (AED60), January 2025
- Transportation Science, Meritorious Service Award, September 2024
- Harvey D. Spangler Professor, Department of Civil & Environmental Engineering, University of Wisconsin-Madison, July 2024 – present
- ASCE Fellow, American Society of Civil Engineers(ASCE), April 2024
- IEEE Senior Member, August 2022
- Communications in Transportation Research, Best Paper Runner Up Award (Li as the Corresponding Author), March, 2022
- Vasant Surti Faculty Fellowship, University of South Florida, November 2021 – August 2022.
- Journal of Transportation Engineering Part A 2020 Best Paper Award (Li as the Corresponding Author)
- USF Outstanding Research Achievement Award, September 2020
- USF College of Engineering Senior Outstanding Achievement Research Award, July 2020
- Ranked 24th among the Top 50 Authors from 1979-2019 in Transportation Research Part B
- IEEE Transactions on Cybernetics, 2018 Outstanding Reviewer Award, January 2019
- Incentive Award, USF Research & Innovation, May 2017
- Susan A. Bracken Faculty Fellowship (first holder), University of South Florida, Nov 2016 – November 2021.
- National Science Foundation Faculty Early Career Development Award (NSF CAREER), 2015
- MSU Nominee for Ralph E. Powe Junior Faculty Enhancement Award, Oak Ridge Associated Universities (ORAU), December 2013
- Best Doctoral Dissertation Presentation Award, Travel Analysis Section, the 90th Annual Meeting of the Transportation Research Board in DC, January 2011

- Dwight David Eisenhower Graduate Fellowship, Federal Highway Administration, USDOT, 2010
- Chester P. Siess Award for Scholarly Achievement and Promise for Research, UIUC, 2009
- Graduate School Conference Travel Award, UIUC, 2007
- UIUC Departmental Fellowship, 2006 – 2007
- Scholarship for Excellence in Study, Second Prize, Tsinghua University, 2004 – 2005
- Scholarship for Excellence in Study, Third Prize, Tsinghua University, 2003 – 2004
- China National Government Scholarship, Second Prize, China, 2002 – 2003

With Students (major or co-major advisees)

- 2026 Southeast Wisconsin Transportation Symposium, Student Research Poster Competition First Award for Bofeng Cao, Oct 2026
- ITS Michigan Scholar Award & CCAT Student Poster Runner-Up Award for Shixiao Liang, April 2026
- 2026 Excellence in Research Award for the Transportation Engineering for Hang Zhou. April 2026
- Academic Stewardship & Leadership Award for Hangyu Li. April 2026
- Wisconsin Initiative for Science Literacy Award for Dr. Keke Long, October 2025
- Award for Postdoc Excellence in Mentoring for Dr. Ke Ma, UW-Madison April 2025
- Milton Pikarsky Memorial Ph.D. Award for Dr. Qianwen Li's Dissertation "Trajectory Optimization for Connected and Autonomous Vehicle Platooning and Split Operations: Modeling and Experiments", Council of University Transportation Centers (CUTC), December 2022
- Neville A. Parker Award in the field of Science and Technology for Qianwen Li's Master Project titled "Trajectory Planning for Autonomous Modular Vehicle Docking and Autonomous Vehicle Platooning Operations", Council of University Transportation Centers (CUTC), December 2021
- Milton Pikarsky Memorial Award for Brian Staes' MS thesis titled "Diagnosis of Freeway Bottlenecks During the Mass Evacuation for Hurricane Irma on Florida's Turnpike Mainline", Council of University Transportation Centers (CUTC), December 2021
- Zhiwei Chen, Xiaowei Shi & Qianwen Li, Bronze Prize, 6th China International College Students 'Internet+' Innovation and Entrepreneurship Competition. Ministry of Education of the People's Republic of China, March 2021 (6.31 million participants, 1.47 million projects from 4,186 colleges in 117 countries and regions).
- Xiaowei Shi, Chinese Overseas Transportation Association (COTA) Research Lightning Talk Competition. Second prize. COTA, March 2021 (among 14 participants across 4 countries).
- Neville A. Parker – Science & Technology Award to Xiaowei Shi's Paper "Trajectory Planning for an Autonomous Vehicle with Conflict Moving Objects over a Fixed Path", Council of University Transportation Centers (CUTC), December 2020
- Charley Wootan Memorial – Masters Award to Zhiwei Chen's MS Thesis "Exploring the Equity Performance of Bike-Sharing Systems with Disaggregated Data: A Story of Southern Tampa", Council of University Transportation Centers (CUTC), December 2020
- Faculty Advisor for the Second Place Winner on the Airport Management and Planning Challenge of the Airport Cooperative Research Program (ACRP) University Design Competition, June 2020
- Faculty Advisor for a finalist team for 2019 Transportation Technology Tournament, Austin

TEACHING EXPERIENCE

- Instructor
  - CIV ENGR 699, Independent Study, UW-Madison, Summer 2024-2025, Fall 2024-2025
  - CIV ENGR 999, Advanced Independent Study, UW-Madison, Summer 2025, Fall 2025
  - ECE 699, Advanced Independent Study, UW-Madison, Spring 2025, Fall 2025
  - ECE 399, Independent Study, UW-Madison, Fall 2024-2025
  - CIVENGR570, Connected and Automated Transportation Systems, UW-Madison, Spring 2025

  - CIVENGR 574, Traffic Control (001), UW-Madison, Fall 2023-2025
  - CIVENGR 679, Special Topics in Transportation and City Planning (001) UW-Madison, Spring 2023-2024
  - CGN 6933, *Connected & Autonomous Vehicle* (a newly created split level course), USF, Spring 2020 - 2022
  - CGN 6933, *Connected & Autonomous Vehicle Seminars*, USF, Spring 2018 -2022
  - CGN 6933, *Transportation & Infrastructure Network (cross-listed with IMSE)*, USF, Spring 2018, Spring 2019
  - TTE 4005, *Transportation Engineering II*, USF, Spring 2017
  - CGN 6933, *Traffic Flow Theory/ITS*, USF, Spring 2016, Fall 2018-2021
  - TTE 6930, Graduate Transportation Seminar USF, Spring 2016
  - CE 8133, *Traffic Flow Theory*, MSU, Spring 2015
  - CE 4133, *Highway Geometric Design*, MSU, Fall 2014
  - CE 4163/6163, *Urban Transportation Planning*, MSU, Fall 2013
  - CE 4990/6990, *Freight Transportation Systems Analysis*, MSU, Fall 2012
  - CE 3113, *Transportation Engineering*, MSU, Spring 2012-2015
- Guest lecturer
  - TTE 4005, *Transportation Engineering II*, USF, Spring 2016
  - CE 1001, Introduction to Civil Engineering, MSU, Fall 2012
  - SO 4990/6990, Transportation and Society, MSU, Spring 2012
  - CEE 201, *Systems Engineering and Economics*, UIUC, Fall 2010
  - CEE 310, *Transportation Engineering*, UIUC, Fall 2009, Fall 2010

  CEE 512, *Logistics Systems Analysis*, UIUC, Spring 2008
- Teaching assistant
  - CEE 310, *Transportation Engineering*, UIUC, Fall 2008 – Fall 2009 (three times)
  - CEE 201, *Systems Engineering and Economics*, UIUC, Fall 2010

    (Led office hours and discussion sessions; prepared course materials and exam problems; graded homework and exams)
- Graduate mentor
  - NEXTRANS Center's Undergraduate Summer Intern Program, 2009
  - UIUC Summer Research Intern Program, 2009, 2010

RESEARCH INTERESTS
- Automated, connected, electric, and shared (ACES) transportation systems modeling
- Connected automated vehicles (CAV) data analytics, modeling, and field experiments
- Modeling of interdependent infrastructure systems

CITATIONS
Google Scholar: https://scholar.google.com/citations?user=c_pXlGUAAAAJ&hl=en
Scopus: https://www.scopus.com/authid/detail.uri?authorId=57192545155#

JOURNAL ARTICLES (*Li as the corresponding author; _graduate, visiting and postdoctoral student)
Published and Accepted
1. *Zhou, H., ..., & Li, X. (2026). OpenPAV: An Open Platform for Production Automated Vehicle Data Collection and Performance Evaluation. ***IEEE Intelligent Transportation Systems Magazine.***
2. *Long, K., Guo, J., Zhang, T., Yu, H., & Li, X. (2026). A Low-Rank Method for Vision Language Model Hallucination Mitigation in Autonomous Driving. ***Transportation Research Part C: Emerging Technologies***, 194, 106092.

3. Wang, Z., Liu, C., Xin, Y., Zhang, Y., Huang, K., Cheng, Q., Zhang, Y., Li, X., Zhang, Y., Liu, Y., Jiang, W., & Liu, Z. (in press). Urban energy and transport impacts of autonomous robotaxi deployment. ***Nature Sustainability***. [Accepted]
4. Wu, K., Zhou, Y., Li, X., Ye, X., & Tu, Z. (2026). A Deep Learning Enabled Economical Transportation Informatization Framework with Sparsely Located Sensors. ***Nature Communications***. [Accepted]
5. *Ma, C., Long, K., Zhou, H., Liang, Z., Li, P., Yu, H. & Li, X. (2026). Real-Time Identification of Cooperative Perception Necessity in Road Traffic Scenarios. ***Transportation Research Part C: Emerging Technologies***, forthcoming https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4973353
6. *Long, K., Shi, H., Liu, J., Xiao, C., & Li, X. (2026). VLM-MPC: Model predictive controller augmented vision language model for autonomous driving. ***Transportation Research Part C: Emerging Technologies***, 183, 105487. https://doi.org/10.1016/j.trc.2025.105487
7. *Zhou, H., Ma, C., Shen, S., Liang, Z., & Li, X. (2026). Towards full-scenario safety evaluation of automated vehicles: A volume-based method. ***Transportation Research Part C: Emerging Technologies***, 183, 105485. https://doi.org/10.1016/j.trc.2025.105485
8. Shi, Y., Long, K., Lam, W. H. K., Li, X., & Ma, W. (2026). Iterative physics-enhanced residual learning for context-aware traffic assignment under biased inputs. ***Transportation Research Part C: Emerging Technologies***, 183, 105498. https://doi.org/10.1016/j.trc.2025.105498
9. *Long, K., Shi, H., Liu, J., & Li, X. (2026). VLM-MPC: Vision Language Foundation Model (VLM)-Guided Model Predictive Controller (MPC) for Autonomous Driving. ***Transportation Research Part C: Emerging Technologies***, 183, 105487.
10. Liu, Q., Huang, H., Zhao, S., Shi, L., Ahn, S., & Li, X. (2026). RiskNet: interaction-aware risk forecasting for autonomous driving in long-tail scenarios. ***Transportation Research Part E: Logistics and Transportation Review***, *205*, 104478. https://doi.org/10.1016/j.tre.2025.104478
11. You, J., Jiang, Z., Huang, Z., Shi, H., Gan, R., Wu, K., Cheng, X., Li, X. &Ran, B. (2026). V2x-vlm: End-to-end v2x cooperative autonomous driving through large vision-language models. ***Transportation Research Part C: Emerging Technologies***, *183*, 105457.
12. *Li, Y., Li, Q., Lin, P., Li, X. (2026) Empirical Evaluation of Connected and Automated Driving Features in Production Vehicles, ***IEEE Intelligent Transportation Systems Magazine (ITSM)***. https://doi.org/10.1109/MITS.2026.3652596
13. *Long, K., Liang, Z., Zhou, H., Li, X. (2025) Urban Vehicle Trajectory Dataset Based on Unmanned Aerial Vehicles Videos, ***IEEE Intelligent Transportation Systems Magazine (ITSM)***. https://doi.org/10.1109/MITS.2025.3633692
14. *Zhang, Y., Ma, K., Zhou, H., Ma, C., Xu, Z., Li, X. (2025) A Modeling Methodology for Car-Following Behaviors of Automated Vehicles: Trade-off Between Stability and Mobility, ***Transportation Research Part B***, 200, 103316. https://doi.org/10.1016/j.trb.2025.103316
15. *Li, H., Sun, X., Zhuang, C., & Li, X. (2025). On the robotic uncertainty of fully autonomous traffic: From stochastic car-following to mobility–safety trade-offs. ***Transportation Research Part C: Emerging Technologies***, 178, 105254. https://doi.org/10.1016/j.trc.2025.105254
16. Li, Z., Bao, Z., Meng, H., Shi, H., Li, Q., Yao, H., Li, X. (2025). Interaction Dataset of Autonomous Vehicles with Traffic Lights and Signs. ***Communications in Transportation Research,*** 5, 100201. https://doi.org/10.1016/j.commtr.2025.100201
17. *Ma, C., Zhou, H., Zhang, P., Ma, K., Shi, H., & Li, X. (2025). Safety assurance adaptive control for modular autonomous vehicles. ***Communications in Transportation Research***, 5, 100204. https://doi.org/10.1016/j.commtr.2025.100204
18. *Liang, Z., Ma, C., Zhou, H., Long, K., & Li, X. (2025). An analytical eco-driving trajectory planning method with field test validation at intersections. ***Transportation Research Part D: Transport and Environment***, 146, 104870. https://doi.org/10.1016/j.trd.2025.104870
19. Cai, X., Zhou, H., Ma, C., Li, X., & Ran, B. (2025). Evaluating Impacts of Public Transit and Automobiles During Connected and Automated Vehicle Adoption. ***Journal of Advanced Transportation,*** 2025(1),

4103948. https://doi.org/10.1155/atr/4103948

20. *Long, K., Shi, X., Li, Y., Chen, Z., Wang, Y., & Li, X. (2025). Before and after riding: changing comfort attitude towards autonomous shuttles from perspectives as riders, drivers, and pedestrians. ***Transportation Research Part A: Policy and Practice***, 199, 104613. https://doi.org/10.1016/j.tra.2025.104613
21. Long, K., Ma, C., Li, H., Li, Z., Huang, H., Shi, H., Huang, Z., Sheng, Z., Shi, L., Li, P., Chen, S., Li, X. (2025). AI-Enabled Digital Twin Framework for Safe and Sustainable Intelligent Transportation. ***Sustainability***, 17(10), 4391. https://doi.org/10.3390/su17104391
22. Huang, H., Li, Z., Cheng, H., Wang, H., Jiang, J., Li, X., & Zgonnikov, A. (2025). Understanding driver cognition and decision-making behaviors in high-risk scenarios: A drift diffusion perspective. ***Accident Analysis & Prevention***, *220*, 108123. https://doi.org/10.1016/j.aap.2025.108123
23. *Zhou, H., Zhang, P., Liang, Z., Li, H., and Li, X. (2025) Coverage trajectory planning problem on 3D terrains with safety constraints for automated lawn mower: Exact and heuristic approaches. ***Robotics and Autonomous Systems***, vol. 193, p. 105109, Nov. 2025. https://doi.org/10.1016/j.robot.2025.105109
24. *Hao, R., Liang, S., Zhai, Z., Zhou, H., Wang, X., Li, X., & Guan, T. (2025). Privacy-preserving awareness in sensor deployment for traffic flow surveillance. ***Computer-Aided Civil and Infrastructure Engineering***, 40(12), 1721-1732. https://doi.org/10.1111/mice.13418
25. Zhou, H., Ma, C., Cai, X., Ma, K., Li, X., & Ran, B. (2025). Security Strategy against Generalized Inter-Vehicle Cyberattacks in Car-following Scenarios for Connected and Autonomous Vehicles. ***Transportation Research Part C***, 178, 105216. https://doi.org/10.1016/j.trc.2025.105216
26. *Zhang, P., Huang, H., Zhou, H., Shi, H., Long, K., & Li, X. (2025). Online adaptive platoon control for connected and automated vehicles via physics enhanced residual learning. ***Transportation Research Part C: Emerging Technologies***, *178*, 105242. https://doi.org/10.1016/j.trc.2025.105242
27. *Zhou, H., Zhang, P., Liang, Z., Li, H., & Li, X. (2025). Coverage trajectory planning problem on 3D terrains with safety constraint for automated lawn mower: Exact and heuristic approaches. ***Robotics and Autonomous Systems***, 105109. https://doi.org/10.1016/j.robot.2025.105109
28. Wang, J., Zhang, R., Zhou, H., Huang, W., Feng, D., Li, X. (2025). Optimization of asphalt mix design considering mixture performance, environmental impact, and life cycle cost**. *Journal of Cleaner Production***, 512, 145618. https://doi.org/10.1016/j.jclepro.2025.145618
29. *Zhou, H., Ma, C., Ma, K., & Li, X. (2025). Quantile-Based Scenario Generation for Automated Vehicle Safety Evaluation. ***Accident Analysis & Prevention***, 218, 108043. https://doi.org/10.1016/j.aap.2025.108043
30. *Zhou, H., Li, Y., Ma, C., Long, K., Li, X. (2025). Modular Vehicle Routing Problem: Applications in Logistics. ***Transportation Research Part E,*** 197, 104022. https://doi.org/10.1016/j.tre.2025.104022
31. *Ma, K., Liang, Z., Zhou, H., Li, X. (2025). Automated vehicle microscopic energy consumption study (AV-Micro): Data collection and model development. ***Energy***, 320, 135096. https://doi.org/10.1016/j.energy.2025.135096
32. *Long, K., Ma, K., Li, Q., Huang, Z., James, R., Ghiasi, A., Li, X. (2025). A Comprehensive Assessment of Connected and Automated Vehicle Analytical, Modeling, and Simulation Tools, ***Transportation Research Part E***, *196*, 104007. https://doi.org/10.1016/j.tre.2025.104007
33. *Ma, K., Shi, H., Ma, C., Huang, Z., Wang, Q., Li, X., Hourdos, J., McHale, G. (2025). Development, Calibration, and Validation of a Novel Nonlinear Car-Following Model: Multivariate Piecewise Linear Approach for Adaptive Cruise Control Vehicles, ***Transportation Research Part E***, *199*, 104031. https://doi.org/10.1016/j.tre.2025.104031
34. *Hao R., Liang S., Guan T., Zhou H., Wang X., Li X., Zhai Z. (2025). Privacy-Preserving Sensor Location Problem for Traffic Flow Surveillance. ***Computer-Aided Civil and Infrastructure Engineering.*** https://doi.org/10.1111/mice.13418

35. *Soleimaniamiri, S., Yao, H., Ghiasi, A., Li, X., Bujanović, P., Vadakpat, G., & Lochrane, T. W. (2025). Edge-computing-based operations for automated vehicles with different cooperation classes at stop-controlled intersections. ***IET Intelligent Transport Systems***, *19*(1), e12577. https://doi.org/10.1049/itr2.12577
36. *Long, K., Sheng, Z., Shi, H., Li, X., Chen, S., & Ahn, S. (2024). Physics enhanced residual learning (perl) framework for vehicle trajectory prediction. ***Communications in Transportation Research***, *5*, 100166. https://doi.org/10.1016/j.commtr.2025.100166
37. *Long, K., Liang, Z., Shi, H., Shi, L., Chen, S., Li, X. (2024). Traffic oscillations mitigation with physics-enhanced residual learning (PERL)-based predictive control. ***Communications in Transportation Research,*** 4, 100154. https://doi.org/10.1016/j.commtr.2024.100154
38. Yao, H., Li, X., Li, Q., & Yu, C. (2024). Safety aware neural network for connected and automated vehicle operations. ***Transportation Research Part E: Logistics and Transportation Review***, 192, 103780. https://doi.org/10.1016/j.tre.2024.103780
39. Liu, C., Xu, Z., Liu, Z., Li, X. & Zhang, Y. (2024). Decentralized multi-vehicle motion planning for platoon forming in mixed traffic using Monte Carlo tree search. ***IEEE Transactions on Intelligent Transportation Systems***, 99, 1–17. https://doi.org/10.1109/TITS.2024.3467091
40. *Han, Y., Ma, X., Yu, B., Li, Q., Zhang, R., Li, X. (2024). Planning two-dimensional trajectories for modular bus enroute docking. ***Transportation Research Part E: Logistics and Transportation Review***, 192, 103769. https://doi.org/10.1016/j.tre.2024.103769
41. *Zhou, H., Ma, K., Liang, S., Li, X., Qu, X. (2024). A unified longitudinal trajectory dataset for automated vehicle. ***Scientific Data***, 11(1), 1123. https://doi.org/10.1038/s41597-024-03795-y
42. *Chen, Z., Stuart, A. L., Guo, Y., Zhang, Y., & Li, X. (2024). Distributional equity impacts of automated vehicles: A disaggregated approach. ***Transportation Research Part C: Emerging Technologies***, *167*, 104828. https://doi.org/10.1016/j.trc.2024.104828
43. *Shi, X., Chen, Z., Li, X. and Qu, X. (2024). Modular autonomous vehicle operations for airport baggage transportation. ***Journal of Air Transport Management***. https://doi.org/10.1016/j.jairtraman.2024.102633
44. Li, Y., Shi, X., & Li, X. (2024). Effect of Riding Experience on Changing Opinions Toward Connected and Autonomous Vehicle Safety – Evidence from Field Experiments. ***Transportation Research Part F: Traffic Psychology and Behaviour***, 105, 491-504. https://doi.org/10.1016/j.trf.2024.07.023
45. Liu, C., Liu, Z., Xu, Z., & Li, X. (2024). A multistep cooperative lane change strategy for connected and autonomous vehicle platoons departing from dedicated lanes. ***Transportation Research Part C: Emerging Technologies***, 165, 104720. https://doi.org/10.1016/j.trc.2024.104720
46. *Long, K., Shi, H., Chen, Z., Liang, Z., Li, X., & de Souza, F. (2024). Bi-scale car-following model calibration based on corridor-level trajectory. ***Transportation Research Part E: Logistics and Transportation Review***, 186, 103497. https://doi.org/10.1016/j.tre.2024.103497
47. Li, Z., Zhou, Y., Zhang, Y., & Li, X. (2024) Enhancing vehicular platoon stability in the presence of communication Cyberattacks: A reliable longitudinal cooperative control strategy, ***Transportation Research Part C: Emerging Technologies,*** 163, 104660. https://doi.org/10.1016/j.trc.2024.104660
48. Wu, K., Zhou, Y., Shi, H., Li, X., Ran, B. (2024) Graph-Based Interaction-Aware Multimodal 2D Vehicle Trajectory Prediction Using Diffusion Graph Convolutional Networks, ***IEEE Transactions On Intelligent Vehicles***, 9, 2: 3630-3643. https://doi.org/10.1109/TIV.2023.3341071
49. Ruan, T.; Wang, H; Jiang, R; Li, X; Xie, N.; Xie, X.; Hao, R.; Dong, C. (2024) A General Hierarchical Control System to Model ACC Systems: An Empirical Study. ***IEEE Transactions on ITS,*** 25, 1: 462-477. https://doi.org/10.1109/TITS.2023.3306349
50. Li, Q., Wang, Z., Kolla, R. D. T. N., Li, M., Yang, R., Lin, P. S., & Li, X. (2023). Modeling effects of roadway lighting photometric criteria on nighttime pedestrian crashes on roadway segments. ***Journal of Safety Research***, forthcoming. https://doi.org/10.1016/j.jsr.2023.07.004

51. *Li, Q., Li, X., Yao, H., Liang, Z., & Xie, W. Automated Vehicle Identification Based on Car-Following Data With Machine Learning. ***IEEE Transactions on ITS***, forthcoming, 10.1109/TITS.2023.3304607.
52. *Shi, X., Chen, Z. & Li, X. (2023) Trajectory Planning for an Autonomous Vehicle with Conflicting Moving Objects Along a Fixed Path – An Exact Solution Method. ***Transportation Research Part B***, 173, 228-246. https://doi.org/10.1016/j.trb.2023.05.001
53. *Li, Q. & Li, X. (2023) Trajectory optimization for autonomous modular vehicle or platooned autonomous vehicle split operations. ***Transportation Research Part E***, 176, 103115. https://doi.org/10.1016/j.tre.2023.103115
54. *Li, X., (2022), Trade-off between safety, mobility and stability in automated vehicle following control. ***Transportation Research Part B,*** 166, 1-18; https://doi.org/10.1016/j.trb.2022.09.003
55. *Chen, Z. & Li, X. & Qu, X., (2022), A continuous model for designing corridor systems with modular autonomous vehicles enabling station-wise docking. ***Transportation Science***, 56(1), 1-30. https://doi.org/10.1287/trsc.2021.1085
56. *Li, Q. & Li, X. (2022) Generalized Fundamental Diagram with Implications of Congestion Mitigation. ***Journal of Transportation Engineering Part A,*** 148(5), 04022021. https://doi.org/10.1061/JTEPBS.0000658
57. *Li, Q., Zhao., D., Li, X. & Wang, X. (2022) Electric Vehicle Sharing Based "Energy Sponge" Service Interfacing Transportation and Power Systems. ***Cleaner Logistics and Supply Chain***, 3, 100022. https://doi.org/10.1016/j.clscn.2021.100022
58. *Fan, H., Yun, L. & Li, X. (2022) A Linear-Time Crystal-Growth Algorithm for Discretization of Continuum Approximation. ***Transportation Research Part E***, 161, 102715. https://doi.org/10.1016/j.tre.2022.102715
59. Ma, K., Wang, H., Zuo, Z., Hou, Y., Li, X., & Jiang, R. (2022). String stability of automated vehicles based on experimental analysis of feedback delay and parasitic lag. ***Transportation Research Part C: Emerging Technologies***, 145, 103927.
60. *Shi, X., Yao, H. Liang, Z. & Li, X. (2022) An Empirical Study on Fuel Consumption of Commercial Automated Vehicles. ***Transportation Research Part D***, 106, 103253. https://doi.org/10.1016/j.trd.2022.103253
61. *Wang, L., Wu, J., Li, X., Qu, X., Wu, Z., & Zhu, L. (2022) Longitudinal Control for Person-Following Robots. ***Journal of Intelligent and Connected Vehicles***. https://doi.org/10.1108/JICV-01-2022-0003
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77. *Zhao, D., Li, X., "Real-World Trajectory Extraction from Aerial Videos – A Comprehensive and Effective Solution", IEEE ITSC, Auckland, New Zealand, October 2019
78. *Shi, X. & Li, X. "Speed Planning for an Autonomous Vehicle with Conflict Moving Objects", IEEE ITSC, Auckland, New Zealand, October 2019
79. Xu, Z., Wang, Y. Wang, G., Li, X., Quan, Y., Zhao, X. "trajectory optimization for a connected automated traffic stream: comparison between an exact model and fast heuristics." In: Proceeding of presentation the 98th TRB Annual Meeting, Washington D.C., January 2019.
80. Yao, H., Cui, J., Li, X., & An, S. "Analysis of relationships in traffic oscillation features with field experiments transportation research board." In: Proceeding of presentation the 98th TRB Annual Meeting, Washington D.C., January 2019.
81. Zhao, D., Li, X., Wang, X., "Electric Vehicle Sharing Based "Energy Sponge" Service Interfacing Transportation and Power Systems." In: Proceeding of the 98th TRB Annual Meeting, Washington D.C., January 2019.
82. Hua, Y., Zhao, D., Wang, X. and Li, X. "Scenario-based Multistage Stochastic Model for Infrastructure Planning for One-way Electric Car Sharing" In: Proceeding of the 97th TRB Annual Meeting, Washington D.C., January 2018 (No. 18-05878).
83. *Ghiasi, A., Hussain, O., Qian, Z. and Li, X. "Markov Chain–Based Mixed Connected Automated Traffic Capacity Analysis Part 1: Analytical Modeling" In: Proceeding of the 97th TRB Annual Meeting, Washington D.C., January 2018 (No. 18-02929).
84. *Yao, H., An, S., Cui, J. and Li, X. "Variable Speed Limits Method with Location Optimization at Signalized Intersection" In: Proceeding of the 97th TRB Annual Meeting, Washington D.C., January 2018 (No. 18-03245).
85. Xu, Y., Jia, B., Ghiasi, A., Li, X. and Li, M. "An Integrated Micro–Macro Approach for High-Speed Railway Energy-Efficient Timetabling Problem" In: Proceeding of the 97th TRB Annual Meeting, Washington D.C., January 2018 (No. 18-02323)
86. Hu, M., Chen, Y., Li, and Xiong, K., "An Agent Based Simulation Model For Distributed Vehicle Sharing Operation", Proceedings of the 2017 Winter Simulation Conference, Las Vegas, Nevada, December 3-6, 2017
87. Lin, P., Wang, Z., Parsafard, M., Li, X. and Chandler, C. "Optimization of Freeway Patrol Operations – A Comprehensive Case Study", 30th Annual Meeting of the International Chinese Transportation Professionals Association (ICTPA), Houston, May 19-21, 2017. ISBN: 978-1-64008-627-2. (Best Paper Award).
88. *Ghiasi, A., Ma, J., Zhou, F. and Li, X. "Speed Harmonization Algorithm Using Connected Autonomous Vehicles" In: Proceeding of the 96th TRB Annual Meeting, Washington D.C., January 2017
89. *Yu, L., Wang, X., Fan, H., Li, X., and Dong, P. "A Continuum Approximation Method for Reliable Facility Location Design with Imperfect Information" In: Proceeding of the 96th TRB Annual Meeting, Washington D.C., January 2017
90. *Li, X. and Ghiasi, A., "Exact Method for A Simplified Trajectory Smoothing Problem with Connected

Automated Vehicles" In: Proceeding of the 96th TRB Annual Meeting, Washington D.C., January 2017

91. Ma, J., Li, X. and Zhou, F. "Designing An Optimal Autonomous Vehicle Sharing And Reservation System: A Linear Programming Approach" In: Proceeding of the 96th TRB Annual Meeting, Washington D.C., January 2017
92. Xu, Y., Jia B., Ghiasi, A. and Li X., "Train Routing And Timetabling Problem With Switchable Dispatching Policy" In: Proceeding of the 96th TRB Annual Meeting, Washington D.C., January 2017
93. *Ma, J., Li, X. and Zhou, F. "Facility Location Design for Interdependent Systems with Probabilistic Disruptions." In: Proceeding of the 95th TRB Annual Meeting, Washington D.C., January 2016
94. *Zhao., M., Cui, J., Li, X., Parsafard, M. and An, S. "Reliable Model for Integrated Supply Chain Design Under Disruption Risk." In: Proceeding of the 95th TRB Annual Meeting, Washington D.C., January 2016
95. *Zhou, F., Li, X. and Ma, J., "Trajectory Control of Automated Connected Vehicles: Fundamental Theories and Traffic Flow Properties." In: Proceeding of the 95th TRB Annual Meeting, Washington D.C., January 2016
96. *Li, C., Ghiasi, A., Li, X. and Chi, G., "Sociodemographic Characteristics Associated with Access to Organic and Local Food." In: Proceeding of the 95th TRB Annual Meeting, Washington D.C., January 2016
97. *Ma, J., Zhou, F., and Li, X. "Trajectory Control of Automated Connected Vehicles: Computational Issues and Optimization." In: Proceeding of the 95th TRB Annual Meeting, Washington D.C., January 2016
98. *Parsafard, M., Li, X., Cui, J., and An, S. "A Describing Function Method for Traffic Oscillation Analysis: Theoretical Properties." In: Proceeding of the 94th TRB Annual Meeting, Washington D.C., January 2015
99. *Parsafard, M., Li, X., Cui, J., and An, S. "A Describing Function Method for Traffic Oscillation Analysis: Environmental Impacts and Oscillation Mitigation." In: Proceeding of the 94th TRB Annual Meeting, Washington D.C., January 2015
100. *Yang, Y., Qin, Y. and Li, X., "Correlation Patterns of Highway Segment Travel Times." In: Proceeding of the 94th TRB Annual Meeting, Washington D.C., January 2015
101. Parsafard, M., Esmaeel, A., Masoud, K., Mohammadreza, N., Li, X., "A Practical Approach for Finding the Optimum Routes for Fuel Delivery Trucks in Large Cities." In: Proceeding of the 94th TRB Annual Meeting, Washington D.C., January 2015
102. *Li, X., Medal, H., and Wang, J. "A Network Design Model under Connectivity Constraints with Heterogeneous Services." In: Proceeding of the 93rd TRB Annual Meeting, Washington D.C., January 2014
103. *Yun, L., Ji, C., Li, X., and Fan, H. "A Reliability Model for Facility Location Design under Imperfect Information." In: Proceeding of the 93rd TRB Annual Meeting, Washington D.C., January 2014
104. Marufuzzaman, M., Li, X., Eksioglu, S. and Wang, J. "Designing a Reliable Intermodal Hub and Spoke System for Biofuel Supply Chain Network." In: Proceeding of the 93rd TRB Annual Meeting, Washington D.C., January 2014
105. Leng, J., Li, X., Li, W. and He, Y. "Distribution and Reliability of Travel Time on Urban Highways Under Ice or Snowfall Conditions." In: Proceeding of the 93rd TRB Annual Meeting, Washington D.C., January 2014
106. *Li, X., Ouyang, Y. and Peng, F. "A supporting station model for reliable infrastructure location design under interdependent disruptions." In: Proceedings of the 20th International Symposium of Traffic and Transportation Theory (ISTTT), Noordwijk, the Netherlands, July 2013
107. *Li, X. "Network design of logistics systems with expedited shipment services." In: Proceeding of the 92nd TRB Annual Meeting, Washington D.C., January 2013
108. *Li, X., Ouyang, Y. and Peng, F. "A Supporting Station Model for Reliable Infrastructure Location Design under Interdependent Disruptions." In: Proceeding of the 92nd TRB Annual Meeting,

Washington D.C., January 2013

109. Li, X., Wang, X. and Ouyang, Y. "Prediction and Field Validation of Traffic Oscillation Propagation under Nonlinear Car-Following Laws." In: Proceeding of the 91st TRB Annual Meeting, Washington D.C., January 2012
110. Chen, Q., Li, X. and Ouyang, Y. "Joint Inventory-Location Problem under the Risk of Probabilistic Facility Disruptions." In: Proceeding of the 91st TRB Annual Meeting, Washington D.C., January 2012
111. An, S., Cui, N., Li, X. and Ouyang, Y. "Reliable Pickup Locations for Transit-based Evacuation under the Risk of Service Disruptions." In: Proceeding of the 91st TRB Annual Meeting, Washington D.C., January 2012
112. Li, X. and Ouyang, Y. Characterization of Traffic Oscillation Propagation Under Nonlinear Car-Following Laws. In: Proceedings of the 19th International Symposium of Traffic and Transportation Theory (ISTTT), Berkeley CA, July 2011
113. Li, X. and Ouyang, Y. "Characterization of Traffic Oscillation Propagation under Nonlinear Car-Following Laws." In: Proceeding of the 90th TRB Annual Meeting, Washington D.C., January 2011
114. Li, X. and Ouyang, Y. "Reliable Traffic Sensor Deployment under Probabilistic Disruptions and Generalized Surveillance Effectiveness Measures." In: Proceeding of the 90th TRB Annual Meeting, Washington D.C., January 2011
115. Li, X., Peng, F., Bai, Y. and Ouyang, Y. "Effects of Disruption Risks on Biorefinery Location Design: Discrete and Continuous Models." In: Proceeding of the 90th TRB Annual Meeting, Washington D.C., January 2011
116. Peng, F., Li, X. and Ouyang, Y. "Multi-Period Installation Design of Railroad Wayside Defect Detection Installations." In: Proceeding of the 90th TRB Annual Meeting, Washington D.C., January 2011
117. Li, X. and Ouyang, Y. "Reliable Sensor Deployment for Network Traffic Surveillance." In: Proceeding of the 4th International Symposium on Transportation Network Reliability, Minneapolis, July 2010
118. Li, X. and Ouyang, Y. "Effects of Failure Correlation on Reliable Facility Location: A Continuum Approximation Approach." In: Proceeding of the 89th TRB Annual Meeting, Washington D.C., January 2010
119. Li, X. and Ouyang, Y. "Reliable Sensor Location for Network Traffic Surveillance." In: Proceeding of the 89th TRB Annual Meeting, Washington D.C., January 2010
120. Ouyang, Y. and Li, X. "On the Propagation of Traffic Oscillations under Nonlinear Car-Following Laws." In: Proceeding of the NSF CMMI Engineering Research and Innovation Conference, Atlanta, January 2011
121. Ouyang, Y., Li, X. and Peng, F. "Some Notes on Traffic Oscillation Measurements and Simulation." In: Proceeding of the NSF CMMI Engineering Research and Innovation Conference, Honolulu, June 2009
122. Li, X., Peng, F. and Ouyang, Y. "Oscillations in Congested Traffic: Observations and Estimation." In: Proceeding of the 88th TRB Annual Meeting, Washington D.C., January 2009
123. Ouyang, Y. and Li, X. "Order Stability of Supply Chains with General Network Topology." In: Proceeding of the 87th TRB Annual Meeting, Washington D.C., January 2008
124. Li, X., Yang, X. and Cao, J. "A Method for Analyzing Traffic Properties of Urban Lands Based on Mobile Phone Traffic." In: Proceeding of the 1st Chinese ITS Annual Meeting, Shanghai, China, December 2005

Invited Presentations

1. Li, X. (Keynote Speaker), “Physics-Enhanced Artificial Intelligence (AI) for Transportation Autonomy”, Workshop on Designing & Evaluating AI-empowered Human–AV Interaction, in conjunction with IEEE ITSC 2026, Naples, Italy, September 15, 2026.
2. Li, X. (Keynote Speaker), “Physics-Enhanced AI for Transportation Autonomy”, Midwest Innovation and Development in Transportation Symposium (MIDTRANS) 2026, University of Kansas Transportation Center, Lawrence, KS, USA, 2026.
3. Li, X. (Keynote Speaker), “Automated/Connected Vehicle Evaluation and Management with Edge Computing”, 1st International Workshop on Edge Computing for Connected and Autonomous Vehicles (EdgeCAV), in conjunction with ACM/IEEE SEC 2025, Washington, D.C., USA, December 6, 2025.
4. Li, X., “Unveiling Uniform Shifted Power Law in Stochastic Human and Autonomous Driving Behavior”, PacTrans Regional Transportation Seminar, University of Washington, November 10th, 2025
5. Li, X., “Unveiling Uniform Shifted Power Law in Stochastic Human and Autonomous Driving Behavior”, College of Engineering, University of Georgia, September 12th, 2025
6. Li, X., “A Physics Enhanced Residual Learning (PERL) Framework and Its Application to Vehicle Trajectory Prediction”, Department of Civil, Materials, and Environmental Engineering, University of Illinois Chicago, March 7th, 2025
7. Li, X., “Trade-off between safety, mobility, and stability in automated vehicle following control: Theories and field experiments”, Kyonggi University, Korea, November 14th, 2024
8. Li, X., “AI in Connected and Automated Transportation”, 2024 BrainLink X-Lab Day, KOFST, Korea, November 11th, 2024
9. Li, X., “Thoughts on Applications of Large Models in Transportation,” The 2024 TRB Annual Automated Road Transportation Symposium, San Diego, CA, July 31, 2024
10. Li, X., “Innovations of AI and Automation in Asphalt Pavement Lifecycle,” 2024 Advanced Materials Industrial Consortium (AMIC) Annual Meeting, Discovery Building, Madison, WI, March 14, 2024
11. Li, X., “Smart Traffic Management into the CAV Era - Telematics, Cooperative Perception, and Digital Twin”, 2023 ITS Wisconsin Transportation Conference, Milwaukee, WI, October 19 2023
12. Li, X., “Telematics Data Applications for Transportation Operations and Management”, 2023 Southeast Wisconsin Transportation Symposium, Milwaukee, WI, October 6, 2023
13. Li, X., “Freeway Applications and Challenges of Cooperative Driving Automation (CDA)”, 2023 ISFO Workshop: Use of Connected and Automated Vehicles (CAV) Technologies for Reliability, Efficiency, and Safety Improvements in Freeway Operations, Vienna, Austria, June 26 2023
14. Li, X., “Freeway Applications and Challenges of Cooperative Driving Automation (CDA)”, 2023 ISFO Workshop: Use of Connected and Automated Vehicles (CAV) Technologies for Reliability, Efficiency, and Safety Improvements in Freeway Operations, June 26 2023
15. Li, X., “Trade-off Between Safety, Mobility and Stability of Automated Vehicles”, Civil, Materials, and Environmental Engineering, University of Illinois Chicago, April 14 2023
16. Li, X., “Trade-off Between Safety, Mobility and Stability of Automated Vehicles”, Illinois Center for Transportation (ICT), University of Illinois at Urbana-Champaign, April 6 2023
17. Li, X., “Roadmap to Cooperative & Automated Transportation”, Civil & Environmental Engineering Department, University of Wisconsin–Milwaukee, February 27 2023
18. Li, X., “Artificial Intelligence (AI) for Connected & Automated Vehicles Systems”, TAAC Lightening, Talk - AI Safety and Certification for Cyber-Physical, Transportation Research Board, February 12 2023
19. Li, X., “Roadmap to Cooperative & Automated Transportation”, Workshop: Connected and Automated Vehicles in Freight, Ridesharing, and (Para)Transit, Transportation Research Board, January 8, 2023

20. Li, X., “Trade-off Between Safety, Mobility and Stability of Automated Vehicles”, Department of Civil and Environmental Engineering, Northwestern University, November 10, 2022
21. Li, X., “Trade-off Between Safety, Mobility and Stability of Automated Vehicles”, Distinguished Seminar Series, Department of Civil and Environmental Engineering, University of Maryland, College Park, November 9, 2022
22. Li, X., “Trade-off Between Safety, Mobility and Stability of Automated Vehicles”, Department of Civil Construction, and Environmental Engineering, North Carolina State University, November 7, 2022
23. Li, X., “Trade-off Between Safety, Mobility and Stability of Automated Vehicles”, Department of Civil and Environmental Engineering, University of California, Irvine, September 19, 2022
24. Li, X., “Roadmap to Cooperative & Automated Transportation?”, School of Civil and Construction Engineering, Invited Presentation, Oregan State University, May 27, 2022
25. Li, X., “Roadmap to Cooperative & Automated Transportation?”, the Electrical and Computer Engineering Department, Indiana University-Purdue University--Indianapolis, April 13, 2022
26. Li, X. (Keynote Speaker), “Roadmap to Cooperative & Automated Transportation?”, Invited Presentation at 1st International Symposium On Smart Vehicles and Mobility, April 8, 2022
27. Li, X., “Roadmap to Cooperative & Automated Transportation”, Invited Presentation at the 20th and 21st Joint COTA International Conference of Transportation Professionals (CICTP), December 18, 2021
28. Li, X., “CAV Traffic Management: Artificial Intelligence (AI) or Physics-based Modeling?”, Invited Presentation at Automated Road Transportation Symposium (ARTS) 2021, July 13, 2021
29. Li, X. & Chen, Z., “Impacts of Automated Vehicles on Mobility and Equity”, Southeast Florida FSUTMS (Florida Standard Urban Transportation Model Structure) Users Group Meeting, Jun 18, 2021
30. Li, X. (Keynote Speaker), “Operations and Planning for Connected and Automated Transportation Systems”, KES International Multi-conferences on Smart Digital Futures Virtual Conference, June 16, 2021
31. Li, X., “Trade-off Between Safety, Mobility and Stability in Automated Vehicle Following Control: Theories and Field Experiments”, TRB Traffic Flow Theory and Characteristics Committee Webinar Series, April 16, 2021
32. Li, X. (Keynote Speaker), “Fleet and Fuel Strategies for Transportation Resilience”, 1ST RIDNAIC International Journal Virtual Summit, March 16, 2021
33. Li, X., “An Empirical Study on Fuel Consumption and Emissions of Commercial Automated Vehicles with Different Headway Settings”, International Conference on Applied Energy, December 8, 2020
34. Li, X., “Trade-off between safety, mobility and stability in automated vehicle following control: Theories and field experiments”, TU Delft TRAIL Webinar, December 2, 2020
35. Li, X., “Empirical Issues in Planning for Connected and Automated Vehicles (CAV)”, International Chinese Transportation Professionals Association US Chapter Joint Webinar, October 30, 2020
36. Li, X., “NSF Proposal Writing Tips”, University of Washington, September 25, 2020
37. Li, X., “Empirical Issues in Planning for Connected and Automated Vehicles (CAV)”, Central Florida Transportation Planning Group (CFTPG) 2020 Meeting on Accelerating the CAV Industry in Central Florida, August 11, 2020. (over 360 attendees; Li serving as a panelist besides the presentation)
38. Li, X., “Manage of Connected and Automated Transportation Systems”, Oregon DOT, June 18, 2020
39. Li, X., “Real-World Trajectory Extraction from Aerial Videos – A Comprehensive and Effective Solution”, Drone Technologies, Education, Training, Research, And Applications Conference, February 21, 2020
40. Li, X., “Manage of Connected and Automated Transportation Systems”, University of Utah & Utah DOT, January 28, 2020

41. Li, X., “Modeling and Field Experiments on Lane Changing of Autonomous Vehicles in Mixed Traffic”, AHB45 Workshop: The Advancement of Modelling Connected and Automated Vehicles: Past and Future, 2020 Transportation Research Board Annual Meeting, January 12, 2020
42. Li, X., “Trajectory Planning for Connected Autonomous Modular Vehicles: Theory, Modeling and Experiments”, Distinguished Seminar Series, Department of Civil & Environmental Engineering, Northeastern University, January 6, 2020
43. Li, X., “Trajectory Planning for Autonomous Modular Vehicles Docking Operations”, TUM-CREATE, Singapore, December 5, 2019
44. Li, X., “Operational Design and Trajectory Planning of Modular Vehicles”, Department of Civil & Environmental Engineering, National University of Singapore, Singapore, December 5, 2019
45. Li, X., “Control of Connected, Automated and Modular Vehicles: Theory, Algorithms, Data and Field Experiments”, Civil and Environmental Engineering, Georgia Institute of Technology, Atlanta, October 31, 2019
46. Li, X., “Control of Connected Autonomous Vehicles in Mixed Traffic: Modeling, Data Analysis and Field Experiments”, USF AI+X Seminar Series, University of South Florida, Oct 18, 2019
47. Li, X., “Trajectory Planning for Connected Autonomous Modular Vehicles: Theory, Modeling and Experiments”, Department of Architecture and Civil Engineering, Chalmers University of Technology, July 30, 2019
48. Li, X., “Design Corridor Systems with Modular Vehicles Enabling En-route Docking”, Department of Architecture and Civil Engineering, 19th COTA International Conference of Transportation Professionals, Nanjing, China, July 5, 2019
49. Li, X., “Planning with Autonomous Vehicles”, Florida Department of Transportation Turnpike Headquarters, Orlando, May 30, 2019
50. Bertini, R., Li X. and Lin, P. “Technology Applications, Partnerships/Collaboration and Research Solutions to Achieve Safety and Mobility Benefits”, Florida Department of Transportation State Materials Office Show Case Meeting, Gainesville, April 12, 2019
51. Li, X., “Planning with Autonomous Vehicles”, Florida Department of Transportation District 7 Tampa Bay Regional Transportation Analysis (TRT) meeting, Tampa, February 21, 2019
52. Li, X., “Planning with Autonomous Vehicles”, Florida Department of Transportation District 7 Planning Office Meeting, Tampa, February 12, 2019
53. Hong, F., Yun, L. and Li, X., “Linear-Time Sweeping Algorithm for Discretization of Continuum Approximation”, Presented at the INFORMS Annual Meeting, Phoenix, November 7, 2018
54. Zhao, D. and Li, X., “Online Demand-Driven EV Sharing Management”, Presented at the INFORMS Annual Meeting, Phoenix, November 6, 2018
55. Chen, Z., Li, X. and Zhou, X., “Management of Shuttle Systems with Modular Vehicles under Oversaturated Demand”, Presented at the INFORMS Annual Meeting, Phoenix, November 4, 2018
56. Li X. “Operations of Modular Vehicles under Oversaturated Traffic”, Department of Civil & Coastal Engineering , Gainesville, October 23, 2018
57. Li X. (Spotlight Session Speaker) “Operational Design for Shuttle Systems with Modular Vehicles under Over-saturated Traffic: Discrete and Continuous Modeling Methods”, 18th COTA International Conference of Transportation Professionals, Beijing, China, June 7, 2018
58. Li X., “A Mixed Traffic Capacity Analysis and Lane Management Model”, School of Traffic and Transportation, Beijing Jiaotong University, Beijing, China, June 7, 2018
59. Li X., “Towards Faster, Greener and Safer Transportation –
    Autonomous, Electric and Shared Transportation Systems
    ”, Research Institute of Ministry of Transport, Beijing, China, June 6, 2018

60. Li, X., “A parsimonious model for trajectory smoothing and joint signal optimization with connected automated vehicles”, Civil and Environmental Engineering and H. John Heinz III College, Carnegie Mellon University, Pittsburg, July 08, 2018
61. Li, X., “Joint Design of Dispatch Headway and Capacity for a Shuttle System under Over-saturated Traffic”, University of Illinois at Urbana-Champaign, Champaign, December 07, 2017
62. Wang, Y. and Li, X., “Passenger Railroad Terminal Simulation & Optimization”, Amtrak, DC, August, 2017
63. Li, X., “Traffic Flow Theory Fundamentals”, Short Course Chang’an University, China, July 2018
64. Li, X. “Highway traffic smoothing via trajectory control of connected and automated vehicles”, Smart Urban Transportation Forum, Institute for Mathematics and its Applications, Minneapolis, May 2017.
65. Li, X. (Keynote Speaker), “Smoothing Traffic with Connected and Automated Vehicles via Trajectory Control”, The AAAI’2017 Workshop on Artificial Intelligence for Connected and Automated Vehicles, San Francisco, February 2017
66. Li, X., Amir, G. “ Connected Autonomous Vehicles on a Mixed Traffic Highway - Speed Harmonization, Capacity Analysis, and Lane Management”, Talking Technology and Transportation (T3e) Webinar. February 8, 2017.
67. Li, X., “Reliable Facility Network Location Design”, a Short Course for the Summer OR/SCM Workshop, National Taiwan University, Taiwan, August 2016
68. Li, X., “Traffic Smoothing with Connected Automated Traffic”, Chang’an University, China, July 2016
69. Li, X., “Traffic Smoothing with Connected Automated Traffic”, Beijing Jiaotong University, China, July 2016
70. Li, X. (Spotlight Speaker), “Traffic Smoothing with Connected Automated Vehicles”, the 16th COTA International Conference of Transportation Professionals, Shanghai, July 2016
71. Li, X., Hu, M., Chi, G., “Population-Infrastructure Nexus: A Heterogeneous Flow based Approach for Responding to Interdependent Disruptions to Critical Infrastructure”, Presented at The National Workshop on Resilience Research , Washington DC, Oct. 2015
72. Li, X. “Large-scale one-way electric vehicle sharing systems: A continuum approximation model”, Presented at International Conference on Operations Excellence & Service Engineering, Orlando, Sept 2015
73. Zhou, F. , Li, X. and Ma, J. “Automated Vehicle Trajectory Control v.s. Classic Traffic Flow Theories”, Presented at Automated Vehicles Symposium – Drivers Vehicles Infrastructure, Ann Arbor, July 2015
74. Ma, J., Li, X., Zhou, F., Hu, J. and Park, B. “Vehicle Trajectory Optimization on a transfized Highway Segment”, Presented at Automated Vehicles Symposium – Drivers Vehicles Infrastructure, Ann Arbor, July 2015
75. Li, X., Ma, J. and Zhou, F. “Location Problem for Interdependent Critical Infrastructure Networks under Disruption Risks.” Presented at the INFORMS Annual Meeting, San Francisco, November 2014
76. Xie, S., Li, X. and Ouyang, Y. “Decomposition of Facility Disruption Correlations via Augmentation of Virtual Supporting Stations.” Presented at the INFORMS Annual Meeting, San Francisco, November 2014
77. Li, X., Ouyang Y., and Peng, F. “Reliable Infrastructure Location Design under Interdependent Disruptions.” Presented at the INFORMS Annual Meeting, Minneapolis, October 2013
78. Yun, L. and Li, X. “Reliability Model for Facility Location Design under Imperfect Information.” 2nd International Transportation PhD Student Symposium, University of Illinois at Urbana-Champaign, September 2013
79. “Integrated Design of Logistics Networks with Expedited Shipments.” 2nd International Transportation PhD Student Symposium, University of Illinois at Urbana-Champaign, September 2013

80. Li, X. “Reliable Traffic Sensor Network Design under Probabilistic Failures.” Department of Civil Engineering and Engineering Mechanics University of Arizona, April 2013
81. Li, X. “Reliable Infrastructure Network Location Design under Probabilistic Disruptions.” Department of Civil, Structural and Environmental Engineering, University at Buffalo, the State University of New York, April 2013
82. Li, X. “Traffic Sensor Network Design under Probabilistic Failures.” Department of Civil & Environmental Engineering, University of Virginia, March 2013
83. Li, X. “At a Glance: Transportation Engineering and Some Research Frontiers.” School of Civil Engineering, Lanzhou University of Technology, China, December 2012
84. Li, X. “Models for Connected Infrastructure Network Design.” Doctoral Annual Symposium on Transportation Science and Engineering, Harbin Institute of Technology, China, December 2012
85. Li, X. “Location Models for Reliable Infrastructure Systems.” School of Economics and Management, Beijing University of Aeronautics and Astronautics, China, December 2012
86. Li, X. “Location Models for Reliable Infrastructure Systems.” School of Traffic and Transportation, Beijing Jiaotong University, China, December 2012
87. Li, X. “A supporting station model for reliable infrastructure location design under interdependent disruptions.” Department of Civil Engineering, Saint Louis University, September 2012
88. Li, X. “Reliable Facility Location Design under Probabilistic Disruptions.” Transportation Work Group, Bagley College of Engineering, Mississippi State University, February 2012
89. Li, X. “Reliable Traffic Sensor Location Design under Probabilistic Disruptions.” Department of Civil and Environmental Engineering, Mississippi State University, June 2011
90. Li, X. “Reliable Transportation Information Infrastructure Systems.” Department of Civil and Environmental Engineering, Rutgers University, New Brunswick, May 2011
91. Li, X. “Reliable Logistics and Transportation Systems.” Kühne Logistics University, Hamburg, Germany, February 2011
92. Li, X. “Selected Topics in Logistics Optimization, Transportation System Analysis and Simulations.” Champaign Simulation Center, Caterpillar Inc., Champaign, December 2010
93. Li, X. and Ouyang, Y. “Reliable Facility Location under Correlated Disruptions: A Continuum Approximation Approach.” Presented at the INFORMS Annual Meeting (Invited), San Diego, October 2009

Other Presentations

1. Chen, Z., and Li, X., “Laws of Accessibility, Bike-sharing Station Distribution, And Equity In Cities”, 2021 INFORMS Annual Meeting, 10/25/2021, Anaheim, CA
2. Li, Q., and Li, X., “Optimal Evacuation Plan for Electric Vehicles in Hurricane”, 2021 INFORMS Annual Meeting, 10/24/2021, Anaheim, CA
3. Li, X., Wang, Z., Zhao, X. and Xu., Z. “Vehicle Trajectory Optimization at a Signalized Intersection in Mixed Traffic: Model and Field Experiments”, International Symposium on Transportation Data & Modeling (ISTDM2021), June 22, 2021
4. Li, Q., Li, X., and Yao, H. “Autonomous Vehicle Identification Based on Car-Following Data”, International Symposium on Transportation Data & Modeling (ISTDM2021), June 22, 2021

5. Li, X., Li, Q., Huang, Z., Halkias, J., & McHale, G. " Lane Changing Maneuver for Autonomous Vehicle in Mixed Traffic." Presented at the 2020 TRB Workshop on Traffic Simulation and Connected and Automated Vehicle (CAV) Modeling, November 17, 2020.
6. Shi, X. & Li, X. “Speed Planning for an Autonomous Vehicle with Conflict Moving Objects”, 24th International Conference Of Hong Kong Society For Transportation Studies, Hong Kong, China, December 14, 2019
7. Chen, Z. & Li, X. “Designing Corridor Systems with Modular Vehicles Enabling En-route Docking: Continuous and Discrete Modeling Methods”, Presented at the INFORMS Annual Meeting, Seattle, October 21, 2019
8. Wang, Y. & Li, X. “Longitudinal Trajectory Control of Connected Autonomous Vehicle with Deep Reinforcement Learning”, Presented at the INFORMS Annual Meeting, Seattle, October 22, 2019
9. Soleimaniamiri, S. & Li, X. “Scheduling of Heterogeneous Connected Automated Vehicles At a General Conflict Area”, Presented at the INFORMS Annual Meeting, Seattle, October 22, 2019
10. Liu, H., Li, X. Soleimaniamiri, S. & Xie, S., “Discrete Network Location and Assignment Model Under Cooperative Coverage in Fire Service”, Presented at the INFORMS Annual Meeting, Seattle, October 23, 2019
11. Zhao, D. & Li, X. “Large Electric Vehicle Sharing Fleet Management System Interfacing Transportation and Power Systems”, Presented at the INFORMS Annual Meeting, Seattle, October 23, 2019
12. Li, X. & Wang, Z. “CAV Trajectory Control in Mixed Traffic at a Signalized Intersection– Learning-based Model and Field Experiments”, ASCE International Conference on Transportation & Development, DC, June 11, 2019
13. Li, X. & Zhao., D., “Video-based Intelligent Road Traffic Universal Analysis Tool (VIRTUAL)”, Quality Counts, LLC, Tampa, June 7, 2019
14. Li, X., “Autonomous Vehicles”, Hunters Green Elementary School, Tampa, May 7, 2019
15. Li X. “Control of Connected Autonomous Vehicles in Mixed Traffic: Modeling and Field Experiments”, Center for Urban Transportation Research Webcast series, April 25, 2019
16. Zhao, D. and Li X., “Online Demand Driven Car Sharing Rebalancing”, Presented at the INFORMS Annual Meeting, Phoenix, November 7, 2018
17. Hua, Y., Zhao, D., Wang, X. and Li X., “Dynamic Electrical Vehicle Sharing System Design”, Presented at the INFORMS Annual Meeting, Phoenix, November 5, 2018
18. Li X. “CAV Trajectory Optimization and Capacity Analysis”, Center for Urban Transportation Research Webcast series, August 23, 2018
19. Ghiasi, A., Hussain, O., Li, X., Qian, S. “A Mixed Traffic Capacity Analysis and Lane Management Model for Connected Automated Vehicles: A Markov Chain Method”, International Conference on Transportation & Development 2018, Pittsburg, July 18, 2018
20. Pi, X., Qian, S.Z., Li, X., “A Stochastic Optimal Control Approach for Real-Time Routing of Connected Automated Vehicles”, International Conference on Transportation & Development 2018, Pittsburg, July 17, 2018
21. Soleimaniamiri, S, Li, X., Wang, Y. “Scheduling of Heterogeneous Connected Automated Vehicles at a General Conflict Point”, 2018 Automated Vehicle Symposium, San Francisco, July 10, 2018
22. Wang, Y., Li, X., “Trajectory Control of Mixed Traffic with Machine Learning”, 2018 Automated Vehicle Symposium, San Francisco, July 9, 2018
23. Wang, Y., Li, X., “Mixed Traffic Longitudinal Trajectory Control at Isolated Signalized Intersections”, 2018 Automated Vehicle Symposium, San Francisco, July 9, 2018
24. Pinjari, A., Zhao, D., Balusu, S., Sheela, P., Li X., Eluru, N., Tabatabaee, F., “Estimation of Truck Counts with Multiple Truckload Categories: A Data-Fusion Approach and a Case Study in Florida”, 7th Innovations in Travel Modeling Conference, Atlanta GA. June 27, 2018

25. Li X., “CAV Trajectory Optimization & Capacity Analysis
    - Modeling Methods and Field Experiments”, 7th Innovations in Travel Modeling Conference, Atlanta GA. June 25, 2018
26. Ghiasi, A. and Li, X. “A Mixed Traffic Capacity Analysis & Lane Management Model for Connected Automated Vehicles: A Markov Chain Method”, 5th Annual UTC Conference for the Southeastern Region, Gainesville, FL, 11/16/2017.
27. Zhao, D. and Li, X. “Electric Vehicle Sharing Based “Energy Sponge” Service Interfacing Transportation & Power Supply”, 5th Annual UTC Conference for the Southeastern Region, Gainesville, FL, 11/16/2017.
28. Zhao, D. and Li, X. “Joint Electric Vehicle Sharing and Vehicle2grid Service System Operations”, INFORMS Annual Meeting, Huston, October 2017.
29. Li, X., Ghiasi, A. and Qu, X. “Joint Optimization of Trajectory and Signal Timing for Connected Automated Traffic”, 9th 9th International Workshop on Computational Transportation Science, Lanzhou, China, July 14, 2017
30. Li, X., “Carsharing Systems & Electric Vehicles”, Uber, San Francesco, July, 11 2017
31. Ghiasi, A. and Li, X., “A Mixed Traffic Capacity Analysis and Lane Management Model for Connected Automated Vehicles: A Markov Chain Method”, The Automated Vehicles Symposium, San Francesco, July, 2017
32. Yun, L., Fang, H. and Li, X., “Reliable Facility Location Design with Imperfect Information: Continuum and Discrete Models”, Presented at INFORMS First Triennial Conference, Chicago, July 2017.
33. Parsafard, M., Li, X., Wang, Z., Lin P.-S., "Deployment Of Patrolling And Stationary Service Vehicles For Freeway Incident Management", Presented at the INFORMS Annual Meeting, Nashville, November 2016
34. Li, X., “An improved shooting heuristic algorithm for optimizing trajectories of connected automated vehicles”, Presented at the Traffic Flow Theory and Characteristics Committee (AHB45), 2016 Summer Meeting, Sydney, July 2016
35. Huang, Y., Li, X., Jiang, R, and Hu M. “Frequent domain predictability of traffic oscillation: Field experiments and statistics analysis.” Presented at the Traffic Flow Theory and Characteristics Committee (AHB45), 2016 Summer Meeting, Sydney, July 2016
36. Li, X., Zhao, M., Cui, J., and Parsafard, M. “Reliable Supply Chain Design with Expedited Shipment Service.” Presented at the INFORMS Annual Meeting, Philadelphia, November 2015
37. Li, X., Cui, J., Ghiasi, A., Ma, J. and Zhou, F. “A Continuum Approximation Model for Electric Vehicle Sharing.” Presented at the INFORMS Annual Meeting, Philadelphia, November 2015
38. Ghiasi, A., Chi, G., Li, C., and Li, X., “Characteristic Associated with the Location of Organic and Local Food Stores.” Presented at the INFORMS Annual Meeting, Philadelphia, November 2015
39. Parsafard, M., Chi, G. and Li, X., “Time Geography Based Mobility Measures for Geo-tagged Twitter Data.” Presented at the INFORMS Annual Meeting, Philadelphia, November 2015
40. Zhou, F. , Li, X. and Ma, J. “A Parsimonious Two-way Shooting Algorithm for Connected Automated Traffic Smoothing: Computational Issues and Optimization”, Presented at Automated Vehicles Symposium – Drivers Vehicles Infrastructure, Ann Arbor, July 2015 (Receiving the Best Research Poster Award)
41. Parsafard, M., Chi, G. and Li, X. “Evaluating Social Media Data Appropriateness for Travel Demand Analysis: A Time Geography Approach.” Presented at the INFORMS Annual Meeting, San Francisco, November 2014
42. Zhou, F., Ma, J., and Li X. “Vehicle Pre-clustering: An Intersection Control Strategy with Emerging Communication and Control Technologies.” Automated Vehicles Symposium – Drivers Vehicles Infrastructure, San Francisco, July 2014.

43. Marufuzzaman M., Eksioglu S.D., Li X., Wang J. “Analyzing the Impact of Intermodal Hub Disruption in Biofuel Supply Chain Network.” NCITEC Annual Conference, Starkville, MS, November 2013. (Placed 1st in the Student Poster Competition)
44. Yun, L., Ji, C., Li, X., and Fan, H. “A Reliability Model for Facility Location Design under Imperfect Information.” NCITEC Annual Conference, Starkville, MS, November 2013.
45. Zhang, L., Li X. and Wen, Y. “Dynamic Vehicle Routing for Transit Evacuation System.” NCITEC Annual Conference, Starkville, MS, November 2013.
46. Li, X., Medal, H. and Wang, J. “Infrastructure Network Design under Additive Service Utilities.” Presented at the INFORMS Annual Meeting, Minneapolis, October 2013
47. Medal, H. and Li, X. “Optimizing the Mobility and Safety of Walk-and-Ride Systems.” Presented at the INFORMS Annual Meeting, Minneapolis, October 2013
48. Marufuzzaman, M., Eksioglu, S., Li, X. and Wang, J. “Models for Designing Reliable Biofuel Supply Chains.” Presented at the INFORMS Annual Meeting, Minneapolis, October 2013
49. Jin, M., Al-Khaled, A. and Li, X. “Evaluating Criticality of Intermodal Network Infrastructures Using Flow Optimization.” Presented at the INFORMS Annual Meeting, Minneapolis, October 2013
50. Li, X. “An Integrated Supply Chain Network Design Model with Expedited Delivery Options.” Presented at the INFORMS Annual Meeting, Phoenix, October 2012
51. Li, X., Peng, F., Ouyang, Y. “Reliable Infrastructure Location Design under Interdependent Disruptions Caused by Supporting System Failures.” Presented at the INFORMS Annual Meeting, Phoenix, October 2012
52. Hajibabaia, H., Saat, M.R., Ouyang, Y., Barkan, C.P.L., Yang, Z., Bowling, K., Somani, K., Lauro, D., and Li, X. “Wayside Defect Detector Data Mining to Predict Potential WILD Train Stops.” Presented at the Annual Conference and Exposition of the American Railway Engineering and Maintenance-of-Way Association (AREMA), Chicago, IL, September 2012.
53. Li, X., Zhang, L. “Transit Evacuation and Connected Vehicles” Presented at the National Rural ITS Conference and Gulf Region ITS Annual Meeting, Biloxi, September 2012
54. Benanzer, T., Li, X. and Ha, C. “Logistics Warehouse Layout Design.” Presented at the INFORMS Annual Meeting, Charlotte, November 2011
55. An, S., Cui, N., Li, X. and Ouyang, Y. “Emergency Rescue Location Planning under the Risk of Probabilistic Disruptions.” Presented at the INFORMS Annual Meeting, Charlotte, November 2011
56. Li, X., Wang, X. and Ouyang, Y. “Empirical Validation of Traffic Oscillation Growth under Nonlinear Car-following Behavior.” Presented at the INFORMS Annual Meeting, Charlotte, November 2011
57. Chen, Q., Li, X. and Ouyang, Y. “Joint Inventory-location Problem under the Risk of Probabilistic Facility Disruptions.” Presented at the INFORMS Annual Meeting, Charlotte, November 2011
58. Li, X. and Ouyang, Y. “Traffic Sensor Deployment under Probabilistic Disruptions and Generalized Surveillance Effectiveness Measures.” Presented at the INFORMS Annual Meeting, Austin, November 2010
59. Li, X. and Ouyang, Y. “A Continuum Approximation Approach to Reliable Traffic Sensor Deployment on Highway Corridors.” Presented at the INFORMS Annual Meeting, Austin, November 2010
60. Li, X. and Ouyang, Y. “Characterization of Traffic Oscillation Propagation under Nonlinear Car-Following Laws.” Presented at the INFORMS Annual Meeting, Austin, November 2010
61. Li, X., Peng, F., Bai, Y. and Ouyang, Y. “The Effects of Operational Disruptions on Biorefinery Location Design.” Presented at the INFORMS Annual Meeting, Austin, November 2010
62. Peng, F., Kang, S., Li, X., Ouyang, Y., Somani, K., and Acharya, D. “A Heuristic Approach to Railroad Track Maintenance Scheduling Problem.” Presented at the 2010 Joint Rail Conference, Urbana, Illinois, April 2010
63. Li, X. and Ouyang, Y. “Reliable Sensor Location for Network Traffic Surveillance.” Presented at the INFORMS Annual Meeting, San Diego, October 2009

64. Peng, F., Li, X. and Ouyang, Y. “Multi-year Installation Design of Railroad Wayside Defect Detection Installations.” Presented at the INFORMS Annual Meeting, San Diego, October 2009
65. Nourbakhsh, S.M., Li, X. and Ouyang, Y. “Stability Analysis of Traffic Trajectory Data.” Presented at the INFORMS Annual Meeting, San Diego, October 2009
66. Li, X., Peng, F. and Ouyang, Y. “A Frequency-Domain Approach to Traffic Oscillation Measurements.” Presented at the INFORMS Annual Meeting, Washington, D.C., October 2008
67. Peng, F., Somani, K., Kang, S., Li, X. and Ouyang, Y. “Scheduling Track Maintenance at CSX Transportation.” Presented at the INFORMS Annual Meeting, Washington, D.C., October 2008
68. Li, X. and Ouyang, Y. “Optimal Sensor Deployment for Traffic Monitoring in Large-scale Transportation Networks: A Preliminary Study.” Presented at the NEXTRANS Center Inaugural Summit, Purdue University, May 2008
69. Ouyang, Y. and Li, X. “Order Stability in Supply Chain Networks.” Presented at the INFORMS Annual Meeting, Seattle, November 2007

REASEARCH PROJECTS

Federal Funds

Sponsor	Title	Role	Period	Total	Li's portion for non-PI Projects
USDOT	Tribal & Rural Autonomous Vehicles for Equity, Livability and Safety (TRAVELS) System Applications	PI/Director Collaborators: UW Transportation faculty, UGA, OKS, UWM, UWash, Morga State and several AV/CVs industry companies	1/26-1/32	$15,000,000 (plus $15,000,000 state and local matching)	
USDOT	National Institute for Congestion Reduction	PI	09/20-09/22	$7,500,000 (plus $7,500,000 state and local matching)	
DOE	Visual-Enhanced Cooperative Traffic Operations (VECTOR) System	PI till 2022/8 then transferred to Co-PI due to Job move	01/22-12/26	$3,500,000+ $2,589,321 matching	$850,000
NSF	CRISP Type 2: Collaborative Research: Harnessing Interdependency for Resilience: Creating an "Energy Sponge" with Cloud Electric Vehicle Sharing	Lead PI Collaborators: Xin Wang, Kaibo Liu, Emilia Tjernstroem, Feng Ju, Jianhui Wang	09/16-8/22	$1,686,426	

USDOT FHWA (ATTAIN)	Advancing Safety and Emergency Operations Through a Regional Connected Vehicle Corridor	Co-PI Collaborator: Yang Tao, David Hansen, City of Madison, Wisconsin; Todd Szymkowski, WisDOT; David Noyce, UW-Madison	2/25-1/30	$5,000,000 (plus $1,537,954 matching)	$600,000
CCAT	Automated Vehicle Generative AI-Based Evaluation and Connectivity-Based Enhancement in Inclement Weather	UW PI	9/26-8/27	$125,000 (+ $75,000 match)	
CCAT	Evaluation of Vehicle Telematics and Infrastructure-based Connected Vehicle Data for Real-Time Safety and Mobility Application	PI	9/25-8/26	$85,000 ($42,500 match from UW OVCR)	
CCAT	Roadway Friction Screening and Measurement with Automated Vehicle Telematics and Control	PI	7/24-6/25	$100,000 (+ $50,000 match from UW OVCR)	
NSF	CPS: Small: NSF-DST: Turning “Tragedy of the Commons (ToC)” into “Emergent Cooperative Behavior (ECB)” for Automated Vehicles at Intersections with Meta-Learning	Solo PI	1/24-12/26	$477,845	
FHWA	Realistic Autonomous Vehicle Behavior Investigation for Stakeholder Empowerment (RAISE)	UW PI Collaborator, Qianwen Li, UGA	11/23-11/26	$400,000	$180,000
Argonne National Lab	Evaluating Energy and mobility impacts of connected and automated vehicles Using Real-World	PI	10/22-11/24	$223,000	

	Data				
CCAT	Traffic Control based on CARMA Platform for Maximal Traffic Mobility and Safety	PI	1/24-12/24	$130,000 (+ $65,000 match from UW OVCR)	
DOE	Visual-Enhanced Cooperative Traffic Operations (VECTOR) System	PI	01/22-04/25	$3,500,000 (plus $2,589,321 state and local matching)	
USDOT FHWA (collaborate with Leidos Inc.)	Developing Improved Analysis, Modeling, and Simulation Tools for Advanced Driver Assistance Systems and Automated Driving System Applications	PI	8/22-7/24	$110,929	$49,110
National Science Foundation (NSF)	CPS: Small: Cyber-Physical Phases of Mixed Traffic with Modular & Autonomous Vehicles: Dynamics, Impacts and Management	Sole PI	10/22-03/25	$500,000	
NSF	EAGER/Collaborative Research: Enable Elastic Capacity for Transportation Infrastructure through a Transmodal Modular Autonomous Vehicle System	Lead PI Collaborator: Joseph Chow from NYU	09/20-08/22	$300,000	
Argonne National Lab	Evaluating Energy and mobility impacts of connected and automated vehicles Using Real-World Data	PI	2/22-2/23	$225,000	
NSF	Collaborative Research: CRISP Type 1: Self-Organized Infrastructure-Population Nexus – A Distributed Heterogeneous Flow-based Modeling Framework	Lead PI Collaborator: Mengqi Hu, Guangqing Chi,	01/16-12/19	$500,000	

NSF	CAREER: Pathway to a Driverless Highway Transportation System: A Behavior Analysis and Trajectory Control Approach	Sole PI	07/15-06/20	$500,000	
NSF	Collaborative Research: Planning Reliable and Resilient Transportation Networks against Correlated Infrastructure Disruptions	Lead PI Collaborator: Yanfeng Ouyang	09/12-08/17	$349,586	
USDOT SBIR (co-sponsored by Connected Wise LLC and I-4 Corridor Program)	On-board Smart Vision System to Support Vehicle to Infrastructure (V2I) Communication	USF PI Collaborator: Pei-Sung Lin	09/19-11/21	$950,000	$300,000
USDOT FHWA (collaborate with Leidos Inc.)	Automated Driving Systems (ADS) OEM-Industry Research Collaboration and Integrated Highway Prototype	PI	11/19-12/21	$75,786	
USDOT FHWA (collaborate with Leidos Inc.)	FHWA Cooperative Automation Research: CARMA Proof-of-Concept TSMO Use Case Testing	PI	11/19-12/21	$189,636	
USDOT FHWA (collaborate with WSP Inc.)	Automated Vehicle Access, Mobility, And Affordability for System Users	PI	10/19-12/21	$160,954	
USDOT FHWA (collaborate with Leidos Inc.)	Trajectory Investigation for Enhanced Microsimulation Calibration Guidance	PI	10/18-10/20	$75,575	

USDOT FHWA (collaborate with Leidos Inc.)	Developing Analysis, Modeling, and Simulation (AMS) Tools for Connected and Automated Vehicle (CAV) Applications	PI	10/17-10/20	$45,000	
USDOT FHWA (collaborate with Leidos Inc.)	Transportation Systems Simulation Manual	Co-PI Collaborator: Robert Bertini	09/16-12/17	$57,501	$15,045
USDOT FHWA (collaborate with Leidos Inc.)	Speed Harmonization Fundamental Research: Phase II	PI	09/15-05/16	$40,500	
USDOT FHWA (collaborate with Leidos Inc.)	Speed Harmonization Fundamental Research	PI Collaborator: Li Zhang	01/15-08/15	$50,738	
USDOE (Department of Energy)	Florida Statewide Alternative Fuel Resiliency Plan	Co-PI Collaborators: Debbie Bass, Caley Johnson, Alexander Kolpakov, Doug Kettles, Carlos Colon	09/19-08/22	$700,000	$74,983
Total				**$41,981,589 (Li as the PI for $38,851,657) +$29,374,096 matching**	

State, Local and Industry Funds

Sponsor	Title	Role	Period	Total	Li's portion
CRH	Rapid Characterization of Virgin Asphalt Binders	PI	07/26-12/27	$204,700	
CRH	Optimization of Recycling Agent Use in Asphalt	PI	07/26-12/27	$226,550	

	Mixtures				
Wisconsin DOT	Severe Weather Connected Vehicle Warning System	Co-PI PI: Andi Bill	9/25-5/27	$250,000	$100,000
Wisconsin DOT	Automated Vehicle Operation in Inclement Weather	PI	9/25-5/27	$200,000	
Wisconsin DOT	Pilot Use of Telematics for Traffic Safety Analysis	PI	8/25-8/26	$150,000	
Wisconsin DOT	Enhanced Light Crosswalk Illumination	UW-PI PI: Tom Shi UW-Milwaukee	8/25-8/26	$150,000	$35,000
City of Madison	Transportation Systems Management and Operations (TSMO) Plan	UW-PI PI: Iteris	8/25-10/26	$180,000	$6,000
Nebraska DOT	Evaluating the Interoperability of Connected and Autonomous Vehicles and Signal Phasing and Timing Infrastructure	UW PI	08/25-5/27	-	$30,000
Ariens	Autonomous Mower and Snowplow Vehicle Design and Implementation	PI	1/24 – 1/26	$150,000	$150,000
University of South Florida	Cordon-Metering Rules for Present-Day and Future Cities	Co-PI	1/23-5/24	$70,000	
Florida Department of Transportation	Infrastructure Enablers for Reliable Cooperative Driving Automation (CDA) Phase I: Existing Infrastructure Evaluation	PI	4/23-2/24	$60,000	$60,000
Florida Department of Transportation	Infrastructure Enablers for Reliable Cooperative Driving Automation (CDA) Phase I: Existing Infrastructure Evaluation	PI	1/22-12/22	$120,000	$120,000
Florida Department of Transportation	Evaluating Artificial Intelligence Based Video Analytics Technologies for Better Traffic Management	PI	1/22-12/22	$100,000	$100,000

Florida Department of Transportation	Evaluation of CARMA for I-STREET testbed implementation	Co-PI	9/21-9/22	$95,000	$42,500
Florida Department of Transportation	Measure the effectiveness of safety treatments with video-based vehicle trajectory data	Co-PI	1/22-12/22	$150,000	$50,000
Florida Department of Transportation	USF-CUTR I-4 FRAME Project Before Study: Data Collection and Analysis of Safety and Mobility Conditions Prior to Implementation	Co-PI Collaborators Pei-Sung Lin, Sisinnio Concas	2/21-4/22	$ 281,019	$80,750
Florida Department of Transportation	Identify Sources and Risks on Cybersecurity for Connected Vehicle Infrastructures	Co-PI Collaborators Pei-Sung Lin, Jay Lagatti	6/20–12/21	$152,990	$41,750
Florida Department of Transportation	Toward a Florida Automated, Connected, Electric and Shared (ACES) Transportation Road Map	Co-PI	11/18–11/20	$200,000	$20,000
NICR (UTC)	Transit Priority	PI	9/20 – 9/21	$99,634	
CTECH (UTC)	Vehicle-based Sensing for Energy and Emission Reduction	PI	4/20-9/21	$100,000	
University of South Florida	Equipment Proposal: A Light Version of USF Testbed for Connected and Autonomous Vehicles	PI	12/18-12/19	$118,900	
Florida Department of Transportation	Modelling Commercial Vehicle Empty Trips With Parameters That Depend On Trip Characteristics	Co-PI Collaborator: Abdul Pinjari	1/16 – 12/17	$124,568	$24,937
Florida Department of Transportation	Optimization of Road Rangers Operations for FDOT District 7 Freeway Systems	Senior Personnel Collaborators: Pei-Sung Lin, Zhenyu Wang	12/15 – 06/16	$49,250	$11,672
CTEDD (UTC)	Incorporating mixed automated vehicle traffic in capacity analysis and system	PI Collaborator: Yujie Hu	2/19-2/20	$35,000	

CTECH (UTC)	Demand-Driven Operational Design for Greener and More Equitable Shared Mobility	PI Collaborator: Samitha Samaranayake	10/18-9/19	$65,782	
CTECH (UTC)	Measuring Impact of Emerging Transportation Technologies on Community Equity in Economy, Environment and Public Health	PI Collaborator: Yu Zhang, Amy Stuart	11/17-12/18	$80,179	
CTECH (UTC)	Electric Vehicle Sharing Planning and Operations	PI	11/16-11/17	$30,000	
Hearin Foundation	Mississippi Transportation Infrastructure Improvement Opportunities and Funding Mechanisms	Co-PI Collaborator: Hugh Medal	01/15-12/15	$105,523	$75,000
Mississippi Department of Transportation	Origin Destination (O-D) and Travel Time (TT) Data	Co-PI Collaborator: Li Zhang	05/14-06/15	$100,000	$50,000
National Center for Intermodal Transportation for Economic Competitiveness (NCITEC)	Intermodal Logistic System Network Design with Expedited Transportation Services	PI	08/13-12/15	$65,863	
Office of Research and Economic Development, (ORED), MSU	Research Group Proposal: Big Data Analysis in Transportation and Sociology	PI	12/13-12/14	$2,000	
ORED	Research Group Proposal: Infrastructure and Livable Community	PI	12/12-12/13	$2,000	
NCITEC	Optimizing the Mobility and Safety of Walk-and-Ride Systems	Co-PI Collaborator: Hugh Medal	08/13-07/15	$99,954	$44,918
NCITEC	Analyzing the Impact of Intermodal-Related Risk to the Design and Management of Biofuel Supply Chain	Co-PI Collaborator: Sandra Eksioglu	08/12-12/14	$100,911	$46,158

Mississippi Department of Transportation	Analyzing the Impact of Intermodal-Related Risk to the Design and Management of Biofuel Supply Chain	PI Collaborator: Sandra Eksioglu	08/12-12/14	$99,642	
NCITEC	Real-Time Transit Vehicle Routing Optimization in Intermodal Emergency Evacuations	Co-PI Collaborator: Li Zhang	08/12-12/13	$100,905	$30,272
NCITEC	Intermodal Transportation Systems Risk Analysis and Resilience in New Madrid Seismic Zone: the Impact to Mississippi	Co-PI Collaborator: Li Zhang	08/12-12/14	$96,810	$29,043
Total				**$3,785,930**	

INDUSTRY EXPERIENCE

Research Analyst **Caterpillar Inc., Champaign IL, Feb. 2011 – Dec. 2011**

- Develop supply chain and manufacture line optimization algorithms and tools
- Develop multidisciplinary design optimization systems

Intern **Beijing, China, Summer 2005**

- Participated in project scheduling for the Center of No. 10 Subway Construction.

SYNERGISTIC ACTIVITIES

Editorship

- Co-Editor-in-Chief, Communications in Transportation Research, Impact Factor 14.5, 2026 - present
- Associate Editors,
    - ASCE Journal of Urban Planning and Development, 2023 - present
    - The ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, March 2022 – present
    - Transportation Research Part E, January 2022- present
    - IEEE Transactions on Intelligent Transportation System, 2021-2025
    - IEEE-Intelligent Transportation Systems Magazine, 2021 – present
    - Cleaner Logistics and Supply Chain, 2021 – 2025
    - IISE Transactions, Department of Transportation Systems Analysis, 2014 - 2024.
    - Transportation Research Part B, Jan 2017 – present
- Editorial Board Member,
    - Transportation Research Part C, March 2017 – present
    - Transportation Research Part E, June 2020 – December 2021
    - Communications in Transportation Research, May 2021 – Feburary 2025
    - The ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, June 2020 – March, 2022
- Guest Editors,
    - Transportation Research Part D, Special Issue on Green pathways for a connected and

automated vehicle future, 2022
    - (Lead) IEEE Intelligent Transportation Systems Magazine, Special Issue on Emerging Mobility Systems, 2017-2018
    - Transportation Research Part C, Special Issue on Modeling and managing mixed traffic with human-driven and automated vehicles, 2018-2020
    - Journal of Advanced Transportation, Special Issue on Advances in Modelling Connected and Automated Vehicles, 2016-2017
    - Journal of Advanced Transportation, Special Issue on Advances in Modelling Connected and Automated Vehicles, 2016-2017
- Area Editor, the COTA International Conferences of Transportation Professionals, 2022

Service

- Professional Society Leaderships and Memberships
  - Interim Vice President for Education, IEEE Intelligent Transportation Systems Society (ITSS), November 2025 - present
  - Founding Chair, Smart Infrastructure Task Force, American Society of Civil Engineering, April 2025-present
  - Founding Chair, Emerging Transportation Technology Testing, IEEE Intelligent Transportation Systems Society (ITSS), 2021-2025
  - Co-Chair, Emerging Transportation Technology Testing, IEEE Intelligent Transportation Systems Society (ITSS), 2025 - Present
  - Chair of SIG C1 Traffic Theory and Modelling, World Conference for Transport Research Society (WCTRS), 2017-2025
  - Member, Committee on Undergraduate Recruitment, Admissions, and Financial Aid, University of Wisconsin–Madison, 2025–2029
  - Voting Member, IEEE Transportation Electrification Council, 2025-present
  - Member, Transportation Network Modeling Committee (AEP40), Transportation Research Board, 2015-present.
  - Member, Traffic Flow Theory and Characteristics Committee (ACP50), Transportation Research Board, 2016-present.
  - Member, Cooperative Driving Automation (CDA) Committee, Society of Automotive Engineers, 2021-present
  - Member, CAV Impacts Committee, ASCE Transportation & Development Institute (T&DI), 2020-present
  - Member, Artificial Intelligence Committee, ASCE Transportation & Development Institute (T&DI), 2020-present
  - Railroad Applications Section (RAS), Institute of Operations Research and Management Science (INFORMS), 2013-2015 (serving as the 2014 Problem Solving Competition (PSC) Chairman and the 2015 Public Relation Officer)
  - Member, CARMA Working Group, USDOT, 2019-Present
- Conference Service
  - Moderator, ASCE 1st Smart Infrastructure Workshop, University of Georgia, 9/29/2025
  - Host, Next Generation Modified Asphalt Research Center (MARC) Research Focuses, MARC Workshop, UW-Madison, February 2025.
  - Associate Editor: Contributed Papers, the 2025 36th IEEE Intelligent Vehicles Symposium (IV 2025), Cluj-Napoca, Romania
  - Host, Next Generation Modified Asphalt Research Center (MARC) Research Focuses, MARC Workshop, UW-Madison, February 2024.
  - Organizing Committee Member, the 25th International Symposium on Transportation and

Traffic Theory (ISTTT25), July 2024.
  - Organizing Committee Member, 2021 International Symposium on Transportation Data and Modelling, Ann Arbor
  - Session Chair, 2016, 2017 Automated Vehicles Symposium, Breakout Sessions (Sponsored by TRB AHB 45 TFTC committee), San Francisco
  - Session Chair, 2018 Automated Vehicles Symposium, Breakout Session: From Automated Vehicles to Automated Transportation Systems (Sponsored by ASCE), San Francisco
  - Session Chair, INFORMS Annual Meeting, 2009 (San Diego), 2010 (Austin), 2012 (Phoenix), 2013 (Minneapolis), 2014 (San Francisco).
  - Session Chair, Session of Intermodal Transportation of Freight and People, Mississippi Department of Transportation Research Needs Workshop, Mississippi State, February 2012
- Panelists
  - Working group member, USDOT VOICES Project, 2021-2024
  - NSF Review Panels, Civil Infrastructure Systems Program, 2013, 2015, 2016, 2017, 2020, 2023, 2024; Cyber Physical Systems Program, 2015, 2020; EPSCoR, 2018, Leap HI, 2020, 2021; CBET, 2019; HDR, 2019
  - CARMA Cooperative Driving Automation (CDA) Panel, ITS All Access Meetings, September 24, 2020
  - The AAAI'2017 Workshop on Artificial Intelligence for Connected and Automated Vehicles, San Francisco, February 2017
  - Education Panelist, Florida Simulation Summit, the National Center for Simulation Orlando, September 2015.
  - Integrated Traffic Flow Models and Analysis for Automated Vehicles Breakout Session, Automated Vehicles Symposium – Drivers Vehicles Infrastructure, Ann Arbor, July 2015
  - Traffic Signal Control with Connected and Automated Vehicles Breakout Session, Automated Vehicles Symposium – Drivers Vehicles Infrastructure, Ann Arbor, July 2015
- Professional Society Memberships
  - Society of Automotive Engineers (SAE), Member, 2022 – present
  - Institute of Electrical and Electronics Engineers (IEEE), Senior Member, Aug 2022- Present; Member, Aug 2018 – Aug 2022
  - American Society of Civil Engineers (ASCE), Member, Mar 2021 – present; Associate Member, ASCE, Jan 2012 – Mar 2021; Transportation & Development Institute; Fellow, ASCE, April 2024 – present
  - Transportation Research Board (TRB), Member, 2007 – present
- University Services
  - CAV Lab Tour Host, WisDOT BTO UW TOPS Lab Tour, UW-Madison, 11/18/2025
  - AV Ride Demonstration Host, WCHA 2025 Summer Highway Conference, Dells, WI, UW-Madison, 6/2/2025
  - AV Ride Demonstration Host, WisDOT Summer of Safety Open House- Hill Farms, UW-Madison, 5/19/2025
  - AV Ride Demonstration Host, 2025 AAA Safe Mobility Conference, UW-Madison, 4/7/2025
  - UW-Madison Committee on University Curriculum Committee, Fall 2025 – present
  - UW-Madison Committee on Undergraduate Recruitment, Admissions, and Financial Aid, Fall 2025 – present
  - CEE Merit Review Committee Member, Fall 2025- present
  - CEE Assistant/Associate/Full Professor Faculty Position RISE AI Search Committee Member, UW-Madison, Fall 2024 – Spring 2025.
  - 5-Year Self Study Report of CEE Professional MS Program Committee Member, Spring 2025.

- Participant, Research Mentor Training (RMT) Series, Inclusive Excellence and Educational Innovation (IEEI) Office, UW-Madison, 1/8/2025-1/17/2025.
- Co-Leader for restructuring the Modified Asphalt Research Center (MARC), UW-Madison, 2024.1 – Present.
- CAV Lab Tour Host, Wisconsin Department of Transportation Bring-Your-Kids-To-Work Day, UW-Madison, 7/15/2024
- CAV Lab Tour Host, Oshkosh Corp. Visit Program, UW-Madison, 5/10/2024
- CAV Lab Tour Host, Ariens Corp. Visit Program, UW-Madison, 4/11/2024
- CAV Lab Tour Host, Soloway Felix Visit Program, UW-Madison, 4/02/2024
- CEE Teaching Faculty Position Search Committee Member, UW-Madison, Summer 2023.
- UW Badger's Talk, Connected and Automated Vehicles: Evaluation & Technology Development, 4/17/2023
- Undergraduate Project Advisor for INTROEGR 170 course, Spring Semester 2023
- CAV Lab Tour Host, BECOME Visit Program, UW-Madison, 3/31/2023
- Faculty Representative, 2023 UW-Platteville Graduate Student Recuitment Event, UW-Madion, 2/28/2023
- AV Demonstration Host, Florida Automated Vehicles Summit, USF, 12/14/2022
- Faculty Mentor, 2023 Innovation in CEE Competition, Department of Civil & Environmental Engineering, UW-Madison, 2022 – 2023
- Member, Mentoring Committee for Assistant Professor Sikai Chen, UW-Madison, USF, 2022.10 – present
- Initiator for Establishing a Center on Autonomous Transportation, UW-Madison, USF, 2022.8 - present
- Liaison for the Ajou University and UW-Madison exchange programs, UW-Madison, 2022-9-present
- AV Demonstration Host, 7th Annual UTC Conference, USF, 3/24/2022
- ISYE Faculty Position Committee Member, USF, 2021 Fall – 2022 Spring
- Transportation Graduate Coordinator, CEE, USF, 2016- present
- NAE Grand Challenges Scholars Program Faculty advisor, CoE, USF, 2018-2019
- Faculty Advisor, Airport Management and Planning Challenge of the Airport Cooperative Research Program (ACRP) USF Team (we won the second place), 2020
- Faculty Advisor, 2019 Transportation Technology Tournament USF team (which has made into the finalist).
- Faculty Advisor, Institute of Transportation Engineers (ITE) Student Chapter at MSU, Spring 2012 – Summer 2015
- Director, Transportation Working Group, Bagley College of Engineering, MSU, 2013-2015.
- Member, Strategic Planning Committee, Transportation & Economic Symposium: Transportation for Mississippi's Sustainable Economic Growth, Mississippi State, 2012
- Vice President, ITE Student Chapter at UIUC, 2008 – 2009
- Coordinator, Highway Safety Manual (HSM) Lead State Peer to Peer Workshop, Schaumburg, Illinois, November 2010
- Coordinator, National Safety Performance Function (SPF) Summit, Chicago, Illinois, July 2009

Ad-Hoc Reviewer

- *Annal of Operations Research*
- *Automation in Construction*
- *Computer-Aided Civil and Infrastructure Engineering*
- *Computers & Industrial Engineering*
- *Computers & Geosciences*

- *IEEE Transactions on Intelligent Transportation Systems*
- *International Journal of Information Technology & Decision Making*
- *International Journal of Management Science and Engineering Management*
- *International Symposium on Transportation and Traffic Theory*
- *Journal of Advanced Transportation*
- *Journal of Computing in Civil Engineering*
- *Journal of Intelligent Transportation Systems*
- *Journal of Transportation and Land Use*
- *Journal of Urban Planning and Development*
- *Naval Research Logistics*
- *Networks*
- *Optimization Letters*
- *Operations Research*
- *Plos One*
- *Scientia Iranica*
- *Transportation Research Part B*
- *Transportation Research Part C*
- *Transportation Research Part D*
- *Transportation Research Part E*
- *Transportation Research Part F*
- *Transportation Research Record (Transportation Research Board Annual Meeting)*
- *Transportation Science*

Education & Outreach

- Ghiasi Amir and Xiaopeng Li "Connected Autonomous Vehicles (CAV) on a Mixed Traffic Highway – Speed Harmonization, Capacity Analysis, and Lane Management". T3e Webinar Series. Intelligent Transportation Systems Joint Program Office, US DOT. February 2017 https://www.pcb.its.dot.gov/t3/s170208_Connected_Autonomous_Vehicles_on_Mixed_Traffic_Highway.asp. (Introducing concepts and recent developments of CAV traffic; over 200 attendees from Federal and State Department of Transportation, Metropolitan Planning Organization, Public Transportation/Transit Agency, Consulting firms, universities etc.)
- 4th Intelligent Transportation Systems (ITS) University Education Workshop, ITS America, Washington DC, September 2016. (Participating in discussion on the ITS curriculum development facing new transportation opportunities and challenges)
- National Effective Teaching Institute workshop, American Society of Engineering Education, Tampa, January 2012

STUDENTS AND SCHOLARS ADVISED

Past Major Advisees

- PhD Graduates
  - Peng Zhang, January 2020 – Fall 2025; Dissertation Title: Physics-Enhanced Residual Learning for Automated Vehicle Platooning Control: Theory and Applications
  - Zhaohui Liang, January 2020 – August 2025; Dissertation Title: Towards Robust Eco-Driving: Platform, Algorithms, Scenarios, and Testing
  - Ke Ma, August 2021 - December 2024; Dissertation Title: Design, Testing, and Evaluation of Automated Vehicle Control Systems in Transportation; Currently Assistant Professor at Hong Kong University of Science and Technology (Guang Zhou), QS ranking #44
  - Keke Long (female), August 2021 - December 2024; Dissertation Title: A Physics Enhanced

Residual Learning (PERL) Framework for Autonomous Vehicle, Assistant Professor at Rutgers University (expected to start in Fall 2026)

- Yuan Wang (Co-advised with Dr. Yu Zhang for the last semester due to the transfer of job), August 2017 – October 2022; Dissertation Title: Advanced Methods for Railroad Station Operation Decisions: Data Analytics, Optimization, Automation; Senior Manager at Walmart Global Technology after graduation.
- Saeid Soleimaniamiri, August 2017 – May 2022; Dissertation Title: Designing Control Strategies For Connected And Automated Vehicles (CAVS) At Transportation Conflict Areas; Currently an Engineer at the Saxton Lab with the Leidos, Inc.
- Runan Yang (female), August 2017 – May 2022; Dissertation Title: High-Risk Traffic Crash Pattern Recognition and Identification Using Econometric Models and Machine Learning Models; Currently a Data Scientist at Innova Partners
- Qianwen Li (female), USF, August 2018 – May 2022; Dissertation Title: Trajectory Planning for Connected and Autonomous Vehicle (CAV) Platooning and Split Operations: Modeling and Experiments; Currently an Assistant Professor at the University of Georgia
- Xiaowei Shi, USF, August 2018 – December 2021; Dissertation Title: Impacts of Automated Vehicle Technologies on Future Traffic; Currently a Assistant Professor at University of Wisconsin - Milwaukee
- Dongfang Zhao, USF, August 2016 – May 2021; Dissertation Title: Electric Vehicle Fleet Management in Transportation and Power Systems; a Research Engineer at Samsung Research America after graduation
- Zhiwei Chen, USF, August 2017 – December 2020; Dissertation Title: Design Next-generation Transportation Systems with Emerging Vehicle Technologies; Currently an Assistant Professor at Drexel University
- Wang Yu (female), USF, August 2015 – December 2010; Dissertation Title: Trajectory Based Traffic Analysis and Control Utilizing Connected Autonomous Vehicles; Software Engineer at AIPlus after graduation.
- Amir Ghiasi, USF, August 2014 – August 2018; Dissertation Title: Connected Autonomous Vehicles: Capacity Analysis, Trajectory Optimization, and Speed Harmonization; Engineer at Leidos, Inc, at the TFHRC Saxton Lab after graduation
- Mohsen Parsafard, USF, August 2013 – August 2017; Dissertation Title: Space-Time Transportation System Modelling: from Traveler's Characteristics to the Network Design Problem; the Director of Data ScienceDirector, Nolan Transportation Group (NTG) after graduation
- Yi Wen, (co-advised with Dr. Zhang Li at MSU), MSU, Spring 2012 - Spring 2015; Engineer in the Virginia Department of Transportation after graduation

- MS Graduates
  - Hossein Amiri, May 2021; Thesis Title: Longitudinal Trajectory Tracking Analysis for Autonomous Electric Vehicles Based on PID Control
  - Brian Staes (co-advised with Dr. Robert Bertini), December 2020; Thesis Title: Diagnosis of Freeway Bottlenecks During the Mass Evacuation for Hurricane Irma on Florida's Turnpike Mainline, Assistant Professor at University of Georgia (expected to start in Fall 2026)
  - Gangyan Zhang, Fall 2018 – December 2019; Thesis Title: Impact of the Number of Lane-Changing Times on Throughput by Fundamental Diagram Based on NGSIM Data
  - Zhiwei Chen, August 2017 – August 2019; Thesis Title: Exploring the Equity Performance of Bike-Sharing Systems with Disaggregated Data: A Story of Southern Tampa
  - Fang Zhou (female), MSU, January 2014 – August 2015 (female; Software Engineer in Leidos Inc. after graduation)
  - Jin Wang (female), MSU, August 2012 – August 2014 (female; PhD Student at Auburn University

after graduation)

- Postdoc Researchers
  - Chengyuan Ma (co-advised with Dr. Sikai Chen), Spring 2023-Spring 2026; Currently Assistant Professor at Nanjing University
  - Gang Liu (co-advised with Dr. Runhua Zhang), Spring 2024-Spring 2025
  - Ke Ma, December 2024 - Spring 2025; Currently Assistant Professor at Hong Kong University of Science and Technology (Guang Zhou), QS ranking #44
  - Heye Huang (female), Fall 2023 - August 2025; Will be an Assistant Professor at Korea Advanced Institute of Science & Technology (KAIST), QS ranking #53
  - Haotian Shi, Fall 2023 - April 2025, Currently a titled Associate Professor at the Tongji University
  - Handong Yao, July 2020-October 2022, Currently an Assistant Professor at the University of Goergia
  - Zhiwei Chen, USF, January 2021 – December 2022; Currently a Tenure-Tracked Assistant Professor at Drexel University.
  - Yongqiang Fan, USF, October 2015 – December 2016; Currently an Assistant Professor at Beijing Post and Telecommunications University
  - Yanqian Wang, USF, November 2015 – November 2016; Currently an Associate Professor at Qingdao University of Technology
  - Parsafard, Mohsen September 2017 – October 2017; Currently the Director of Data Science Director, Nolan Transportation Group (NTG)
- Research Assistant Professor
  - Runhua Zhang, UW-Maidson, Jan-Aug 2026; Will join Florida Atlantic University
  - Qianwen Li (female), USF, May - Aug 2022; Currently an Assistant Professor at the University of Georgia

Current Advisees

- Postdoc Researchers
  - Keke Long (female), from Spring 2025
  - Yang Li (female), from Spring 2026
- PhD Students
  - Weiran Han (female) (co-advised with Dr. Runhua Zhang), from Spring 2025
  - Bofeng Cao, ECE, from Fall 2024
  - Shixiao Liang, from Fall 2023
  - Zheng Li (co-advised with Dr. Sikai Chen), from Fall 2023
  - Hangyu Li, from Fall 2023
  - Yang Li (Female), from Fall 2023
  - Hang Zhou, from Fall 2023

Undergraduate Researchers

- Thea Fonstad, ECE, UW-Madison, Spring 2025
- Kevin Cai, ECE, UW-Madison, Spring 2025
- Lufei Wang, ECE, UW-Madison, Spring 2025
- Xiaoyue Ma, ECE, UW-Madison, Spring 2025
- Wuzhen Li, ECE, UW-Madison, Spring 2025
- Yuxin Wu, ECE, UW-Madison, Fall 2024 – Spring 2025
- Anirudh Kompella, ECE, UW-Madison, Fall 2024 - Spring 2025
- Yun-Chen Lu, ECE, UW-Madison, Fall 2024
- Juyoung Oh, ECE, UW-Madison, Spring 2024 - Spring 2025
- Yizhou Lu, CS, UW-Madison, Spring 2024 - Spring 2025
- Daichi Zhang, ECE, UW-Madison, Spring 2024 - Spring 2025

- Yunqing Xiao, ECE, UW-Madison, Spring 2024 - Spring 2025
- Augustus Liu, ECE, UW-Madison, Summer 2024
- Tund Theerawit, ECE, UW-Madison, Summer 2024
- Ishaan Udia, ECE, UW-Madison, Summer 2024
- Hoa-Quy Le, ECE, UW-Madison, Spring 2024
- Sandeep Sankar, ECE, UW-Madison, Spring 2024
- Boyue Du, ECE, UW-Madison, Spring 2024
- Kwasi Debrah-Pinamang, ECE, UW-Madison, Spring 2024
- Mingyu Guo, ECE, UW-Madison, Spring 2024
- William Alden Strong, ECE, UW-Madison, Spring 2024
- Oleksandr Lisnichenko, Computer Science and Engineering, USF, Spring 2020 - Spring 2021
- Kyle Finch, Mechanical Engineering, USF, Spring 2019 - present
- Tyler Brown, Computer Science and Engineering, USF, Spring 2019– December 2020
- Miracle Oluchi Anyachukwu, CEE, USF, Summer 2017 (female; African American)
- Sabrina Mamo, CEE, USF, Spring 2017 (female; Latino)
- Kamal Taha, CEE, USF, Spring 2017
- John Green, CEE, MSU, Spring 2015 (African American)
- Heather Hart, CEE, MSU, 2014-2015 (female)
- Samantha Frederick, CEE, MSU, 2013 (female)
- Patrick Kuykendall, CEE, MSU, 2013

Visiting Students

UW-Madison

- *Zelin Wang, PhD Students, Southeast University, January 2025 – March 2025*
- *Jinbiao Huo, PhD Students, Southeast University, January 2024 – January 2025*
- *Yuqin Zhang, PhD Students, Chang'an University, January 2024 – December 2024*
- *Yuxin Shi, PhD Students, The Hong Kong Polytechnic University, March 2024 – October 2024*
- *Tiancheng Ruan, PhD Students, Southeast University, February 2023 – February 2024*

USF

- Zhen Wang, PhD Students, Chang'an University, February 2019 – February 2020
- Jun Du, PhD Student, Beijing Jiaotong University, October 2018 – October 2019
- Mingyang Pei, PhD Student, South China University of Technology, October 2018 – October 2019
- Handong Yao, PhD Student, Harbin Institute of Technology, September 2017 – July 2020
- Lina Ma, PhD Student, Harbin Institute of Technology, December 2016 – December 2017
- Lifen Yun, Instructor, Beijing Jiaotong University, October 2015 – December 2016
- Zeng Lu, PhD Student, Beijing Jiaotong University, November 2016 – June 2017
- Yan Xu, PhD Student, Beijing Jiaotong University, September 2015 – September 2016

MSU

- Lifen Yun, Graduate Student, Beijing Jiaotong University, April 2013 – April 2014
- Jiaqi Ma, PhD Candidate, University of Virginia, April 2014 – June 2014

Committee Member

- Yongju Kim, UW-Madison,2026
- Zilin Huang, UW-Madison,2025
- Hesham Gaied Alyamani, UW-Madison,2025
- Cedar Andriola, UW-Madison,2025
- Alireza Ghasemi, West Virgina University, 2025,
- Haotian Cui, PhD Student, UW-Madison, 2024
- Zhiqiang Wu, PhD Student, USF , 2022
- Yikang Hua, PhD, ISE UW-Madison, 2021

- Yi Li, PhD, CSE, USF, 2020
- Funke Adeosun, PhD, CEE, USF, 2020
- Sun Liu, PhD, CEE, IMSE, USF, 2020
- Chowdhury Sudipta, PhD, CEE, MSU, 2019
- Yuan Wang, PhD, CEE, USF, 2019
- Eghbal Rashidi, PhD, ISE, MSU, 2016 (Postdoc at Clemson University)
- Mohammad Marufuzzaman, PhD, ISE, MSU, 2015 (Assistant Professor at MSU)
- Zhitong Huang, PhD, CEE 2015 (Engineer in Leidos Inc.)
- Brian Staes, Master, CEE, USF, 2020
- Brian Jordon, Master, CEE, MSU, 2015
- Tasmin Farzana, Master, CEE, MSU, 2013
- Heather Dee Craft, Master, CEE, MSU, 2013
- Gregory J Norwood, Master, CEE, MSU, 2012

External Advisor

- Meng Zhao, PhD Candidate, Harbin Institute of Technology, Fall 2015 – August 2018

Visiting Scholars

UW-Madison

- *Lifen Yun, Associate Professor, Beijing Jiaotong University, Fall 2025 –*
- *Ruru Hao, Associate Professor, Chang'an University, Fall 2022 – Fall 2023*

USF

- Jie Xiong, Lecturer, Beijing University of Technology, Spring 2019 – Spring 2020
- Jin Zhang , Associate Professor, Qingdao University of Science and Technology, Fall 2015 – Fall 2016
- Tao Wang, Associate Professor, Qingdao University of Science and Technology, Fall 2015 – Fall 2016

MSU

- Junqiang Leng, Associate Professor, Harbin Institute of Technology, Fall 2014– Fall 2015
- Wendong Yang , Associate Professor, Nanjing University of Aeronautics and Astronautics, Fall 2013– Fall 2014