

## Lishengsa Yue, Ph.D.

Research Interest: Autonomous and Connected Vehicle, Advanced Driver Assistance System, Human Factor, Artificial Intelligence, Multi-Driver Simulator and Simulation, Traffic Safety  
2010yuelishengsa@tongji.edu.cn

---

### EDUCATION

*Ph.D.* in Civil Engineering, 2017 – 2020, University of Central Florida, United States

*Ph.D.* in Transportation Engineering, 2014 – 2020, Tongji University, China

*B.Sc.* in Transportation Engineering (Ranked in top 5%), 2010 – 2014, Tongji University, China

### EMPLOYMENT

- Research Professor (2022 – Present): College of Transportation Engineering., Tongji University
- Postdoctoral Research Scholar (2020 – 2022): Civil & Environmental Engineering Dept., UCF
- Graduate Research Assistant (2017 – 2020): Civil & Environmental Engineering Dept., UCF

### PROFESSIONAL SOCIETY MEMBERSHIPS & ACTIVITIES

**Handling Editor**, Transportation Research Record (2021-present)

**Member**, Committee on Human Factors of Vehicles (ACH30) (2022-present)

**Associate Member**, American Society of Civil Engineers (2020-present)

### FUNDED RESEARCH PROJECTS IN RECENT THREE YEARS

1. Investigating the Effects of Cooperative Driving for CAVs in Different Driving Scenarios Using Multi-Driver Simulator Experiments (**PI**; funded by U.S. DOT University Transportation Center (SAFER-SIM), \$95000; 2021-2022)
2. Investigation of Merge Strategies at Ramp Area in Connected Vehicle Environment based on Multi-Driver Simulator System (**PI**; funded by U.S. DOT University Transportation Center (SAFER-SIM), \$80000; 2020-2021)
3. Improving Multimodal Traffic Safety for Multi-Lane Arterials (*Researcher*; funded by Florida Department of Transportation, \$440000; 2020-2022)
4. Investigating the Effects of Smartphone-based P2V Warning using Driving Simulator Experiments (**Lead researcher**; funded by U.S. DOT University Transportation Center (SAFER-SIM), \$60000; 2019-2021).
5. Investigation of Driving Behavior at Alternative Intersection Designs and Safety Improvement: A Driver Simulator Study (*Researcher*; funded by U.S. DOT University Transportation Center (SAFER-SIM), \$125627; 2019-2021)
6. Assessing the Effectiveness of Connected Vehicle Technologies based on Driving Simulator Experiments (**Lead researcher**; funded by U.S. DOT University Transportation Center (SAFER-SIM); \$50000, 2018-2020).
7. Evaluation of Innovative Alternative Intersection Designs in the Development of Safety Performance Functions and Crash Modification Factors (**Lead researcher**; funded by Florida Department of Transportation, \$486640; 2017-2020).

## SELECTED JOURNAL PUBLICATIONS IN RECENT THREE YEARS

1. Yin, L., Chen, X., & **Yue, L.** (2022). Extracting Overtaking Segments by Unsupervised Clustering and Predicting Non-motorized Vehicle's Trajectory, *Journal of Advanced Transportation*
2. Abdel-Aty, M., **Yue, L.\***, Wu, Y., Zheng, O. (2022). Investigating the Effects of P2V Human-Machine Interface Design Using Driving Simulator Experiment, *Transportation Research Record* (In press)
3. **Yue, L.\***, Abdel-Aty, M., & Wang, Z. (2022). Effects of connected and autonomous vehicle merging behavior on mainline human-driven vehicle. *Journal of Intelligent and Connected Vehicles*, 5(1): 36-45.
4. **Yue, L.\***, Abdel-Aty, M., Wu, Y., Jorge U., & Yuan, C. (2021). Effects of Forward Collision Warning in Different Pre-Crash Scenarios. *Transportation Research Part F: Traffic Psychology and Behaviour*, 76, 336-352.
5. Yuan, J., Abdel-Aty, M., Fu, J., Wu, Y., **Yue, L.**, & Eluru, N. (2021). Developing safety performance functions for freeways at different aggregation levels using multi-state microscopic traffic detector data. *Accident Analysis & Prevention*, 151, 105984.
6. Lee, J., Mao, S., Abdel-Aty, M., Lian, Y., **Yue, L.**, & Yun, I. (2021). Association between Truck Crashes due to Mechanical Failure and Truck Age. *Journal of Advanced Transportation*.
7. **Yue, L.\***, Abdel-Aty, M. A., Wu, Y., & Yuan, J. (2020). An Augmentation Function for Active Pedestrian Safety System Based on Crash Risk Evaluation. *IEEE Transactions on Vehicular Technology*, 69(11), 12459-12469.
8. **Yue, L.\***, Abdel-Aty, M., Wu, Y., Hasan, S., & Zheng, O. (2020). Identifying Pedestrian Crash Contributing Factors Using Association Analysis and Their Implications for Development of Active Pedestrian Safety System. *Transportation research record*, 2674(8), 861-874.
9. Yuan, J., Abdel-Aty, M. A., **Yue, L.**, & Cai, Q. (2020). Modeling Real-Time Cycle-Level Crash Risk at Signalized Intersections Based on High-Resolution Event-Based Data. *IEEE Transactions on Intelligent Transportation Systems*, 22(11), 6700-6715.
10. **Yue, L.\***, Abdel-Aty, M., Wu, Y., Yuan, J., & Morris, M. (2020). Influence of Pedestrian-to-Vehicle Technology on Drivers' Response and Safety Benefits Considering Pre-Crash Conditions. *Transportation Research Part F: Traffic Psychology and Behaviour*, 73, 50-65.
11. **Yue, L.**, Abdel-Aty, M., Wu, Y., Zheng, O., & Yuan, J. (2020). In-depth Approach for Identifying Crash Causation Patterns and Its Implications for Pedestrian Crash Prevention. *Journal of Safety Research*, 73, 119-132.
12. Abdelrahman, A., Abdel-Aty, M., Lee, J., & **Yue, L.** (2020). Evaluation of Displaced Left-Turn Intersections. *Transportation Engineering*, 100006.
13. Al-Omari, M. E. M. A., Abdel-Aty, M., Lee, J., **Yue, L.**, & Abdelrahman, A. (2020). Safety Evaluation of Median U-Turn Crossover-Based Intersections. *Transportation Research Record*, 0361198120921158.
14. **Yue, L.\***, Abdel-Aty, M., Wu, Y., (2019) The Practical Effectiveness of Advanced Driver Assistance Systems at Different Roadway Facilities: System Limitation, Adoption and Usage. *IEEE Transactions on Intelligent Transportation Systems*, 21(9), 3859-3870.
15. **Yue, L.\***, Abdel-Aty, M., Lee, J., & Farid, A. (2019). Effects of Signalization at Rural Intersections Considering the Elderly Driving Population. *Transportation Research Record*, 2673(2), 743-757.
16. Wu, Y., Abdel-Aty, M., Zheng, O., Cai, Q., & **Yue, L.** (2019). Developing a Crash Warning System for the Bike Lane Area at Intersections with Connected Vehicle Technology. *Transportation Research Record*, 2673(4), 47-58.

17. **Yue, L\***, Abdel-Aty, M., Wu, Y., & Wang, L. (2018). Assessment of the Safety Benefits of Vehicles' Advanced Driver Assistance, Connectivity and Low Level Automation Systems. *Accident Analysis & Prevention*, 117, 55-64.
18. Chen, X., **Yue, L\***, & Han, H. (2018). Overtaking Disturbance on a Moped-Bicycle-Shared Bicycle Path and Corresponding New Bicycle Path Design Principles. *Journal of Transportation Engineering, Part A: Systems*, 144(9), 04018048.
19. Chen, X., **Yue, L\***, & Yang, K. (2017). Safety Evaluation of Overtaken Bicycle on a Shared Bicycle Path. *Journal of Tongji University*, 45(2), 215-222.

#### **SELECTED CONFERENCE PUBLICATIONS IN RECENT THREE YEARS**

1. Wang, Z., **Yue, L\***, Abdel-Aty, M., Zhu, J., Zheng, O., & Zaki, M. (2022) Cooperative Driving at Non-Signalized Intersection in a Mixed Traffic Environment: A Co-Simulation Based Multi-Driver Driving Simulator Study. The 101th Annual Meeting of the Transportation Research Board, Washington D.C., U.S
2. Yin, L., Chen, X., & **Yue, L.** (2021), Prediction of Non-Motorized Vehicle's Overtaking Trajectory on Shared Bicycle Lane. The 100th Annual Meeting of the Transportation Research Board, Washington D.C., U.S.
3. **Yue, L.**, Abdel-Aty, M., & Wu, Y. (2019). The Crash Avoidance Effectiveness of Advanced Driver Assistance Systems in Real-World Environment. In *International Conference on Transportation and Development 2019: Smarter and Safer Mobility and Cities* (pp. 41-51). Reston, VA: American Society of Civil Engineers.
4. **Yue, L.**, Abdel-Aty, M., & Wang, L. (2018). Assessment of The Safety Benefits of Connected Vehicle Technologies. The 97th Annual Meeting of the Transportation Research Board, Washington D.C., U.S.
5. Chen, X., **Yue, L.**, Wu, Z., & Wang, Y. (2018). Detection of Drivers' Moderate Drowsiness Using a Wavelet-Entropy-Based Smart Algorithm. In *CICTP 2017: Transportation Reform and Change—Equity, Inclusiveness, Sharing, and Innovation* (pp. 4292-4301). Reston, VA: American Society of Civil Engineers.