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Xiaozheng (Sean) He Ph.D.

Department of Civil and Environmental Engineering
Rensselaer Polytechnic Institute
110 8th St. • JEC 4034 • Troy, NY 12180

Phone: 518-276-8043
Fax: 518-276-4833
Email: hex6@rpi.edu

EDUCATION

Ph.D., Transportation Engineering	University of Minnesota - Twin Cities	2010
M.S., Transportation Engineering	University of Minnesota - Twin Cities	2007
M.S., Computational Mathematics	Nanjing University, China	2003
B.S., Computational Mathematics	Nanjing University, China	2000

APPOINTMENTS

Associate Professor	Rensselaer Polytechnic Institute (2024 ~ present)
Assistant Professor	Rensselaer Polytechnic Institute (2017 ~ 2023)
Assistant Director of Research	VREF Center of Excellence for Sustainable Urban Freight System
Postdoc Research Associate	NEXTRANS Center, Purdue University (2012 ~ 2016)
Postdoc Research Associate	University of Minnesota - Twin Cities (2011 ~ 2012)

AWARDS AND HONORS

Transportation Science Meritorious Service Award	2024
NSF CAREER Award	2021
ASCE ExCEEd Faculty Fellowship, United States Military Academy West Point	2018
Best Paper Award at IEEE International Conference on ITS	2015
NCITE Student Scholarship Award	2010
Matthew J. Huber Award for Excellence in Transportation Research	2007
Nanrui Excellent Graduate Thesis Fund	2001

RESEARCH INTERESTS

Transportation systems modeling and analysis

- Traffic flow dynamics
- Connected vehicle systems analysis
- Transportation system resilience

Traffic operations and management

- Traffic control and management for mixed traffic flows
- Network-wide synergic traffic control and management strategies
- Transportation network evacuation

TEACHING

A. Courses

○ CIVL4660	Traffic Engineering (19 students)	Spring, 2025
○ CIVL6260	Transportation Network Analysis (8 students)	Fall, 2024

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- CIVL1300 Beginning Programming in CEE (72 students) Spring 2024
- CIVL4660 Traffic Engineering (12 students) Fall, 2023
- CIVL2030 Introduction to Transportation Engineering (48 students) Spring, 2023
- CIVL4660 Traffic Engineering (5 students) Fall, 2022
- CIVL2030 Introduction to Transportation Engineering (65 students) Spring, 2022
- CIVL4660 Traffic Engineering (8 students) Fall, 2021
- CIVL2030 Introduction to Transportation Engineering (53 students) Spring, 2021
- CIVL4660 Traffic Engineering (20 students) Fall, 2020
- CIVL2030 Introduction to Transportation Engineering (73 students) Spring, 2020
- CIVL4660 Traffic Engineering (24 students) Fall, 2019
- CIVL6260 Transportation Network Analysis (11 Students) Spring, 2019
- CIVL6270 Traffic Control and Simulation (10 Students) Fall, 2018
- CIVL4660 Traffic Engineering (6 students) Spring, 2018
- CIVL6260 Transportation Network Analysis (7 students) Fall, 2017
- CIVL4660 Traffic Engineering (16 students) Spring, 2017
- CE 8217 Transportation Network Analysis (Co-instructor, 7 students) Fall, 2010

B. Student Supervision

1. Doctoral Students

- Xiaoyu Ma CEE Fall, 2019~Aug. 2024
  - Dissertation: Intelligent information provision for emerging transportation systems
  - Won the 2023 *WTS Helene M. Overly Memorial Scholarship*
    Great New York: Leonard Braun Memorial Scholarship
  - Won the 2022 *Founders Award of Excellence*
  - Won the 2021 *Belsky Award for Computational Sciences and Engineering*
- Yu Wei, CEE Fall, 2018~May 2023
  - Dissertation: Fostering cooperative intersection crossing for connected and automated traffic on urban corridors
  - First employment: Transportation Modeler @ The Corradino Group
- Chunheng Jiang, Computer Science (Co-advised with Prof. Jianxi Gao) Summer, 2018~May 2022
  - Dissertation: Mean-Field Approaches for Network Inference and Learning
  - First employment: Machine Learning Engineer @ Google

2. Master Students

- Afnan Khwaja, ME, CEE Spring, 2018
- Cristian J. Maranon, ME, CEE Spring, 2019
- Osowski, Kevin, ME, CEE Spring, 2022
- Terres, Frankie, ME, CEE Spring, 2022
- Campbell, Jay, ME, CEE Spring 2024
- Alyassin, Mariam, ME, CEE Spring 2025
- Henan Zhu, MS, CEE Fall, 2022~Fall, 2024
  - Thesis: Characterizing rural resident acceptance of drone delivery: A large language model (LLM) empowered approach

3. Doctoral Dissertation Committee Member

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- Julia Coutinho Amara, CEE 2023
- Anye Zhou CEE (Georgia Tech) 2022
- Woojung Kim CEE 2022
- Oriana Andreina Calderon Quevedo 2022
- Sofia Perez-Guzman, CEE 2021
- Yue Ding, CEE 2021
- Abdelrahman Ismael, CEE 2020
- Joshua Schmid, CEE 2020
- Carlos Rivera, CEE 2020
- Diana G. Ramires-Rios, CEE 2020
- Trilce Encarnacion, CEE 2019
- Shama Campbell, CEE 2019
- Lokesh Kumar Kalahasthi, CEE 2018

4. Master Thesis Committee Member

- Sofia Perez-Guzman, MS, CEE 2020
- Benjamin Caron, MS, CEE 2020
- Abdelrahman Kamal Ismael, MS, CEE 2019
- Nilson Herazo-Padilla, MS, CEE 2017

5. Research Experiences for Undergraduates (REU) Program

- Carrie M. Conton, Mechanical Engineering, Prairie View A&M University Summer, 2019
  - Won a travel award to present her research at *UTRC's Transportation Technology Symposium*
  - Enrolled into the Masters of Urban Planning at Texas A&M University Fall, 2024

6. High school summer intern

- Saanvi Sharma Summer, 2024
  - Project won a grand prize in the engineering category at Synopsys Science Fair 2024

C. Mentor

- Summer Research Experience for Undergraduates (Carrie M. Conton) Summer 2019
- NEXTRANS Undergraduate Summer Internship Program Summers 2013~2016
- ASCE Mentor Matching Program Spring 2010

D. Other services

- NSF-CMMI Game Changer Academies for Advancing Research Innovation Fall, 2024
- FE Exam Review Session (Transportation and Surveying) March 2024
- Faculty advisor for ITE Student Chapter at RPI Fall, 2023~
- Undergraduate Committee of CEE Spring
- Graduate Committee of CEE Fall, 2023~
- FE Exam Review Session (Transportation) Spring 2017
- Speaker for Tau Beta Pi Engineering Honor Society research symposium February 2022

RESEARCH ACTIVITIES

Ongoing projects:

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- NSF CAREER Award, *Robust Traffic Management for Connected Vehicle Systems*, $599,875, 5/1/2021—4/30/2026.
- *Untangling Heterogeneous Passenger and Freight Policy and Program Causal Contributions with Data-Driven Time-of-Day Monitoring and Evaluation Frameworks*, sponsored US DOT via SEMPACT Region 2 UTC, $288K, 9/1/2024 – 8/31/2025.
- *SuperTruck 3: A Zero Emission Freight Future*, sponsored by USDOE via Volvo Trucks, $3.54M, 10/1/2023 – 9/30/2027 (PI: Jose Holguin-Veras, Co-PI: Sean He & Dr. Cara Wang).
- *Quantum Computing Exploration to Advance Supply Chain Sustainability*, sponsored by IBM, $200k, 11/1/2024 – 12/31/2025 (PI: Ruimin Ke).
- *Building an Equitable, Sustainable, and Intelligent Logistics System with Drones in Rural Areas*, sponsored NSF via Mogan State University, $77,510, 9/1/2022—8/31/2025.

Completed Projects:

- NSF *INTERN program*, $55K, 1/1/2023—6/30/2023.
- *Fostering the Resilience of Connected Autonomous Urban Transportation Systems*, RPI Knowledge and Innovation Program Seed Fund, $72K, 1/1/2018-6/30/2019.
- *Evaluating a Microhub Pilot Program*, sponsored USDOT via SEMPACT, $578K, 9/1/2023 – 8/31/2024 (PI: Cara Wang, Co-PI: Jose Holguin-Veras & Sean He)
- *Energy Efficient Logistics: Behavior-Based Policymaking at NYC-Albany Corridor*, sponsored by US DOE, $4M, 10/1/2017 – 9/30/2022 (PI: Jose Holguin-Veras, Co-PI: Dr. Sean He & Dr. Cara Wang).

PUBLICATIONS

J. Journal papers (peer-reviewed)

73. Ma X., **He* X.** (2024) Providing real-time en-route suggestions to CAVs for congestion mitigation: A two-way deep reinforcement learning approach. *Transportation Research Part B* 103014.
72. Wei Y., **He* X.** (2024) Exploring safety-stability tradeoffs in cooperative CAV platoon controls with bidirectional impacts. *Sensors* 24(5), 1614.
71. Huo X., **He X.**, Xiong Z., Wu* X., (2024) multi-objective optimization for scheduling multi-load automated guided vehicles with consideration of energy consumption. *Transportation Research Part C* 161, 104548.
70. Sun* W., Hu Y., Zhang X., Yao X., **He. X.** (2024) Adversarial style-irrelevant feature learning with refined soft pseudo labels for domain-adaptive vehicle re-identification. *IEEE Transactions on Intelligent Transportation Systems* 25(12), 20602-20615.
69. Seilabi* S.E., Pourgholamali M., Miralinaghi M., **He X.**, Labi S. (2024) Optimizing Dedicated Lanes and Tolling Schemes for Connected and Autonomous Vehicles to Address Bottleneck Congestion Considering Morning Commuter Departure Choices. *Journal Intelligent Transportation Systems*, in press, DOI: 10.1080/15472450.2024.2408024
68. Wang P., Wu X., **He* X.** (2023) Vibration-theoretic approach to vulnerability analysis of connected automated vehicle platoon control. *IEEE Transactions on Intelligent Transportation Systems* 24(10), 11334-11344.
67. **He* X.**, Wei Y., Holguín-Veras J. (2023) Brownian bridge-based speed imputation technique for truck energy consumption estimation using low-resolution GPS data. *Transportation Research Part D* 144, 103546.

66. Sun* W., Xu F., Zhang X., Hu Y., Dai G., **He X.** (2023) A Dual-Branch Network for Few-Shot Vehicle Re-Identification with Enhanced Global and Local Features. *IEEE Transactions on Instrumentation & Measurement*, accepted, DOI: 10.1109/TIM.2023.3285978.
65. Yang* X., Wang C., **He X.**, Zhang H., Xu G. (2023) Location Optimization for Community Smart Parcel Lockers Based on Bilevel Programming. *Journal of Advanced Transportation*, Article ID 1998188.
64. Zhao C., Sun* W., Zhang X., **He X.**, Zou J., Zhao W. (2023) Feature matching combining variable velocity model with reverse optical flow. *Computer Systems Science and Engineering* 45(2), 1083-1094.
63. **He* X.,** Wang J., Peeta S., Liu H.X. (2022) Day-to-day signal retiming scheme for single-destination traffic networks based on a flow splitting approach. *Networks and Spatial Economics* 22, 855–882.
62. Wang J., **He X.**, Peeta* S., Wang W. (2022) Globally convergent line search algorithm with Euler-based step-size determination method for the continuous network design problem. *Transportation Research Part B* 163, 119-144.
61. Wang P., **He X.,** Wei Y., Wu* X., Wang Y. (2022) Damping behavior analysis for connected automated vehicles with linear car following control. *Transportation Research Part C* 138, 103617.
60. Wei Y., **He* X.** (2022) Adaptive control for reliable cooperative intersection crossing of connected autonomous vehicles. *International Journal of Mechanical System Dynamics* 2(3), 278-289. (**Editor's Choice**)
59. Sun* W., Dai. G, Zhang X., **He X.**, Chen X. (2022) TBE-Net: A three-branch embedding network with part-aware ability and feature complementary learning for vehicle re-identification. *IEEE Transactions on Intelligent Transportation Systems* 23(9), 14557-14569, DOI: 10.1109/TITS.2021.3130403.
58. Sun* W., Dai. L, Zhang X., Chang P., **He X.** (2022) RSOD: Real-time Small Object Detection algorithm in UAV-based traffic monitoring. *Applied Intelligence* 52(8), 8448-8463.
57. Wang J., **He* X.**, Peeta S., Yang X. (2022) Feedback perimeter control with online estimation of maximum throughput for an incident-affected road network. *Journal of Intelligent Transportation Systems: Technology, Planning, and Operations* 26(1), 81-99.
56. Ma X., **He* X.** (2021) Period-to-period toll adjustment schemes for mixed traffic with time-varying electric vehicle penetration. *Transportation Research Part C* 129, 103237.
55. Phan* T.V., **He X.**, Thong D.V. (2021) Global exponential stability of a neural network for inverse variational inequalities. *Journal of Optimization Theory and Applications* 190, 915–930.
54. Sun* W., Chen X., Zhang X., Dai G., Chang P., **He X.** (2021) A multi-feature learning model with enhanced local attention for vehicle re-identification. *Computers, Materials & Continua* 69(3), 3549–3561.
53. Zhang* X., Chen X., Sun W., **He X.** (2021) Vehicle re-identification model based on optimized DenseNet121 with joint loss. *Computers, Materials & Continua* 67(3), 3933-3948.
52. Wang P., Wu X., **He* X.** (2020) Modeling and analyzing cyberattack effects on connected automated vehicular platoons. *Transportation Research Part C* 115*,* 102625.
51. Holguín-Veras* J., Encarnación T., Ramírez-Ríos D., **He X.**, Kalahasthi L., Pérez-Guzmán S., Sanchez-Díaz I., González-Calderón C. (2020) A multiclass tour-flow model and its role in multi-class freight tour synthesis. *Transportation Science* 54(3), 631-650.
50. Sun* W., Zhang X., **He X.**, Jin Y., Zhang X. (2020) A two-stage vehicle type recognition method combining the most effective Gabor features. *Computers, Materials & Continua* 65(3), 2489-2510.

49. Sun* W., Zhang X., **He X.** (2020) Lightweight image classifier using dilated and depthwise separable convolutions. *Journal of Cloud Computing*, 9(1), 55.
48. Miralinaghi M., Peeta* S., **He X.**, Ukkusuri S.V. (2019). Managing morning congestion with tradable credits under commuter heterogeneity and loss aversion. *Transportmetrica B* 7(1), 1780-1808.
47. Wang J., Peeta* S., **He X.** (2019) Multiclass traffic assignment model for mixed traffic flow of human-driven vehicles and connected and autonomous vehicles. *Transportation Research Part B* 126, 139-168.
46. Li* Y., Tang C., Li K., **He X.**, Peeta S., Wang Y. (2019) Consensus-based cooperative control for multi-platoon under the connected vehicles environment. *IEEE Transactions on Intelligent Transportation Systems* 20(6), 2220-2229.
45. Hong L., Ye B., Zhang H., Ouyang* M., **He X.** (2019) Spatiotemporal vulnerability analysis of railway system with heterogeneous train flows. *Transportation Research Part A* 130, 725-744.
44. Hong L., Zhang X., Ouyang* M., Tian, H., **He X.** (2019) Vulnerability analysis of public transit systems from the perspective of urban residential communities. *Reliability Engineering & System Safety* 189, 143-156.
43. Wang P., Yu G., Wu* X., Wang Y., **He X.** (2019) Spreading patterns of malicious information on single-lane platooned traffic in a connected environment. *Computer-Aided Civil and Infrastructure Engineering* 34(3), 248-265.
42. Sun* W., Du H, Nie S., **He X.** (2019) Traffic sign recognition method integrating multi-layer features and kernel extreme learning machine classifier. *Computers, Materials and Continua* 60(1), 147-161.
41. Sun* W., Zhang X., Shi S., **He X.** (2019) Vehicle classification approach based on the combined texture and shape features with a compressive dictionary learning. *IET Intelligent Transport Systems* 13(7), 1069-1077.
40. Sun* W., Zhang X., Zhang X., **He X.**, Zhang G. (2019) Driving behavior recognition based on orientation and position deviations. *International Journal of Sensor Networks* 30(3), 161-171.
39. **He* X.**, Wu X. (2018) Eco-driving advisory strategies for a platoon of mixed gasoline and electric vehicles in a connected vehicle system. *Transportation Research Part D* 63, 907-922.
38. **He X.**, Zheng H., Peeta* S., Li Y. (2018) Network design model to integrate shelter assignment with contraflow operations in emergency evacuation planning. *Networks and Spatial Economics* 18(4), 1027-1050.
37. Li M., Wu* X., **He X.**, Yu G., Wang Y. (2018) An eco-driving system for electric vehicles with signal control under V2X environment. *Transportation Research Part C* 93, 335-350.
36. Kim Y.H., Peeta* S., **He X.** (2018) An analytical model to characterize the spatiotemporal propagation of information under vehicle-to-vehicle communications. *IEEE Transactions on Intelligent Transportation Systems* 19(1), 3-12.
35. Wang J., Peeta* S. **He X.**, Zhao J. (2018) Combined multinomial logit modal split and paired combinational logit traffic assignment model. *Transportmetrica A* 14(9), 737-760.
34. Wang J., Kim Y.H., **He X.**, Peeta* S. (2018) Analytical model for information flow propagation wave under an information relay control strategy in a congested vehicle-to-vehicle communication environment. *Transportation Research Part C* 94, 1-18.
33. Wang* J., Du M., Lu L., **He X.** (2018) Maximizing network throughput under stochastic user equilibrium

with elastic demand. *Networks and Spatial Economics* 18(1) 115-143.

32. Li* Y., Tang C., Li K., Peeta S., **He X.**, Wang Y. (2018) Nonlinear finite-time consensus-based connected vehicle platoon control under fixed and switching communication topologies. *Transportation Research Part C* 93, 525-543.
31. Li* Y., Zhang L., Zheng H., **He X.**, Peeta S., Zheng T., Li Y. (2018) Non-lane-discipline-based car-following model for electric vehicles in transportation cyber-physical systems. *IEEE Transactions on Intelligent Transportation Systems* 19(1), 38-47.
30. Zheng H., **He X.**, Li Y., Peeta* S. (2017) Traffic equilibrium and charging facility location for electric vehicles. *Networks and Spatial Economics* 17(2), 435-457.
29. Kim Y.H., Peeta* S., **He X.** (2017) Modeling the information flow propagation wave under vehicle-to-vehicle communications. *Transportation Research Part C* 85, 377-395.
28. Yan Y., Hong* L., **He X.**, Ouyang M., Peeta S., Chen X. (2017). Pre-disaster investment decisions for strengthening the Chinese railway system under earthquakes. *Transportation Research Part E* 105, 39-59.
27. Sun W., Zhang X., Peeta* S., **He X.**, Li Y. (2017) A real-time fatigue driving recognition method incorporating contextual features and two fusion levels. *IEEE Transactions on Intelligent Transportation Systems* 18(12), 3408-3420.
26. Li* Y., Chen W., Peeta S., **He X.**, Zheng T., Feng H. (2017) An extended microscopic traffic flow model based on the spring-mass system theory. *Modern Physics Letters B* 31(9), 1750090.
25. Hong L., Yan Y., Ouyang* M., Tian, H., **He X.** (2017) Vulnerability effects of passengers' intermodal transfer distance preference and subway expansion on complementary urban public transport systems. *Reliability Engineering & System Safety* 158, 58-72.
24. **He X.**, Peeta* S. (2016) A marginal utility day-to-day traffic evolution model based on one-step strategic thinking. *Transportation Research Part B* 84, 237-255.
23. Wang J., **He X.**, Peeta* S. (2016) Sensitivity analysis based approximation models for day-to-day link flow evolution process. *Transportation Research Part B* 92, 35-53.
22. Paleti C., **He X.**, Peeta* S. (2016) Design of income-equitable toll prices for HOT lanes in a single toll facility. *Transportation Planning and Technology* 39(4), 389-406.
21. Guo Y., **He X.**, Peeta* S., Weiss J. (2016) Internal curing for concrete bridge decks: Integrating a social cost analysis in evaluating the long-term benefit. *Transportation Research Record* 2577, 25-34.
20. Li* Y., Jiang, X., Zhu H., **He X.**, Peeta S., Zheng T., Li Y. (2016) Multiple measures based chaotic time series for traffic flow prediction based on Bayesian theory. *Nonlinear Dynamics* 85(1), 179-194.
19. Li* Y., Zhang L., Peeta S., **He X.**, Zheng T., Li Y. (2016) A car following model considering the effect of electronic throttle opening angle under connected environment. *Nonlinear Dynamics* 85(4), 2115-2125.
18. **He X.**, Liu* H.X., Liu X. (2015) Optimal vehicle speed trajectory on signalized arterial with consideration of queue. *Transportation Research Part C* 61, 106-120.
17. **He X.**, Zheng H., Peeta* S. (2015) Model and a solution algorithm for the dynamic resource allocation problem for large-scale transportation network evacuation. *Transportation Research Part C* 59, 233-247.
16. Wu X., **He X.**, Yu* G., Harmandayan A., Wang Y. (2015) Energy-optimal speed control for electric vehicles on signalized arterials. *IEEE Transactions on Intelligent Transportation Systems* 16(5), 2786- 2796.
15. Grady C.A., **He X.**, Peeta* S. (2015) Integrating social network analysis with analytic network process for

international development project selection. *Expert Systems with Applications* 42(12), 5128-5138.

14. Hong L., Ouyang* M., Peeta S., **He X.**, Yan Y. (2015) Vulnerability assessment and mitigation for the Chinese railway system under floods. *Reliability Engineering & System Safety* 137, 58-68.
13. Sun* W., Zhang X., Peeta S., **He X.**, Li., Y., Zhu S. (2015) A self-adaptive dynamic recognition model for fatigue driving based on multi-source information and two levels of fusion. *Sensors* 15, 24191-24213.
12. Li* Y., Zhang L., Zheng H., **He X.**, Peeta S., Zheng T., Li Y. (2015) Evaluating the energy consumption of electric vehicles based on car-following model under non-lane discipline. *Nonlinear Dynamics* 82(1), 629-641.
11. Li* Y., Zhang L., Peeta S., Pan H., Zheng T., Li Y., **He X.** (2015) Non-lane-discipline based car-following model considering the effects of two-sided lateral gaps. *Nonlinear Dynamics* 80(1-2), 227-238.
10. **He X.**, Peeta* S. (2014) Modeling dynamic resource allocation for transportation network evacuation. *Networks and Spatial Economics* 14(3), 505-530.
9. Di X., **He X.**, Guo X., Liu* H.X. (2014) Braess Paradox under the boundedly rational user equilibria. *Transportation Research Part B* 67, 86-108.
8. **He X.**, Liu* H.X. (2012) Modeling the day-to-day traffic evolution process after an unexpected network disruption. *Transportation Research Part B* 46(1), 50-71.
7. **He X.**, Chen A., Chaovalitwongse* W.A., Liu H.X. (2012) An improved linearization technique for a class of quadratic 0-1 programming problems. *Optimization Letters* 6(1), 31-41.
6. **He X.**, Liu* H.X. (2011) Inverse variational inequalities with projection-based solution methods. *European Journal of Operational Research* 208(1), 12-18.
5. **He X.**, Guo X., Liu* H.X. (2010) A link-based day-to-day traffic assignment model. *Transportation Research Part B* 44(4), 597-608.
4. He* B.S., **He X.**, Liu H.X. (2010) Solving a class of constrained "black-box" inverse variational inequalities. *European Journal of Operational Research* 204(3), 391-401.
3. He* B.S., **He X.**, Liu H.X., Wu T., (2009) Self-adaptive projection method for co-coercive variational inequalities. *European Journal of Operational Research* 196(1), 43-48.
2. Liu* H.X., **He X.**, He B.S. (2009) Method of successive weighted averages (MSWA) and self-regulated averaging schemes for solving stochastic user equilibrium problem. *Networks and Spatial Economics* 9(4), 485-503.
1. Liu* H.X., **He X.**, Recker W. (2007) Estimation of the time-dependency of values of travel time and its reliability from loop detector data. *Transportation Research Part B* 41(4), 448-461.

C. Conference proceedings (peer-reviewed)

42. Ma, X., **He*, X.** (2024) Providing real-time en-route suggestions to CAVs for congestion mitigation: A two-way deep reinforcement learning approach. *The 25th International Symposium on Transportation and Traffic Theory (ISTTT25), July 15-17, 2024, Ann Arbor Michigan*.
41. Wang P., Gao S., Li Z., Wu X., **He X.** (2024). Fuel Consumption and Emissions Analysis of a Connected Automated Vehicle Platoon in Unstable Traffic. In *Chinese Conference on Swarm Intelligence and Cooperative Control* (pp. 455-464). Springer Nature Singapore.
40. Ma X., **He* X.** (2024) Correlated CAV En-route Routing for Congestion Mitigation. *The 103rd*

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Transportation Research Board Annual Meeting, Jan. 7-11, Washington DC. TRBAM-24-04110.

39. Ma X., **He* X.**, Holguin-Veras H. (2024) Optimizing On-Street Parking Allocation for Multiple Users Considering Double Parking Impacts. *The 103rd Transportation Research Board Annual Meeting*, Jan. 7-11, Washington DC. TRBAM-24-04163.
38. Zhu H., **He* X.**, Wang Z. (2024) Analyzing Equity in Truck-Drone Cooperative Delivery for Rural Areas. *The 103rd Transportation Research Board Annual Meeting*, Jan. 7-11, Washington DC. TRBAM-24-05112.
37. Wang J., **He X.**, Peeta* S., Wang W., (2023) Globally convergent line search algorithm with Euler-based step size-determination method for continuous network design problem. *The 102nd Transportation Research Board Annual Meeting*, Jan. 8-12, Washington DC. TRBAM-23-03465
36. Seilabi, S., Pourgholamai M., Miralinaghi* M, de Almeida Correia G., **He X.**, Labi S. (2023) Transportation Networks for Autonomous, Connected, and Electrified Vehicles, *The 102nd Transportation Research Board Annual Meeting*, Jan. 8-12, Washington DC. TRBAM-23-04085.
35. Yang X., Wang C., **He X.**, Zhang H., Xu G. (2023) Location optimization for community parcel lockers based on bi-level programming. CICTP2023.
34. Ma X., **He* X.** (2022) Within-day Dynamic Traffic Assignment for Multi-class Travelers with Instantaneous and Forecast Information. *Proceedings of the 101st Transportation Research Board Annual Meeting*, 22-03558, Washington DC.
33. **He* X.,** Wei Y., Holguin-Veras J. (2022) Brownian bridge-based imputation technique for truck energy consumption estimation using low-resolution GPS data. *Proceedings of the 101st Transportation Research Board Annual Meeting*, 22-02453, Washington DC.
32. Wang P., Wu X., **He* X.** (2022) Vibration theory approach to assessing the vulnerability of connected automated vehicle platoon under periodic cyberattacks. *Proceedings of the 101st Transportation Research Board Annual Meeting*, 22-03531, Washington DC.
31. Wang* Z., **He X.**, Zhou Z. (2022) Integrated and Equitable Same Day Delivery in Rural Area with Drones. *Proceedings of the 101st Transportation Research Board Annual Meeting*, 22-03624, Washington DC.
30. Wang P., Wu X., **He* X.** (2021) Characterizing connected and automated vehicle platooning vulnerability under periodic perturbation. The *24th IEEE Intelligent Transportation Systems Conference* (ITSC) pp.3845-3850, Sept. 19-22, 2021, Indianapolis, IN, USA.
29. Wang P., Tao, Z., Wu* X., **He X.**, Zhou B. (2021). Formulating Connected Automated Vehicle Dynamics under Cyberattacks Based on the Spring-Mass System. The 20th and 21st joint *COTA international Conference of Transportation Professionals* (CICTP), Nov. 16-19, 2021, Chang'an University Xi'an, China (pp. 1693-1703)
28. Ma X. **He* X.** (2021) Period-to-period tolling scheme for mixed traffic of electric and gasoline vehicles with time-varying flow composition. *Proceedings of the 100th Transportation Research Board Annual Meeting*, Washington DC.
27. Ma X. **He* X.** (2020) Multiclass Traffic Evolution Model for Electric and Gasoline Vehicles with Bi-Objective Path Choice Behavior. *Proceedings of the 99th Transportation Research Board Annual Meeting*, Washington DC.
26. Wang P., Wu X., **He* X.**, Yu G. (2020) Analyzing Cyberattack Effects on Connected Autonomous Vehicles Using a Cooperative Intelligent Driver Model. *Proceedings of the 99th Transportation Research Board*

Annual Meeting, Washington DC.

25. Wang* J., Peeta S., **He X.** (2020) Multiclass Traffic Assignment Model for Mixed Traffic Flow of Human-Driven Vehicles and Connected and Autonomous Vehicles. *Proceedings of the 99th Transportation Research Board Annual Meeting*, Jan. 12-16, 2020, Washington DC.
24. Sun* W., Zhang X., **He X.** (2019) A Lightweight Neural Network Combining Dilated Convolution and Depthwise Separable Convolution. The 9th EAI International Conference on Cloud Computing (CloudComp 2019), December 4-5, 2019, Sydney, Australia.
23. Sun* W., Zhang X., **He X.**, Jin Y., Zhang X. (2019) Driving behavior recognition based on orientation and position deviations. The 5th International Conference on Artificial Intelligence and Security, July 26-28, 2019, New York University, NY, USA.
22. Wang P., **He* X.**, Wu X., Yu G., Chu, L. (2019) A control approach to mitigate cyberattacks on a connected vehicle platoon using an improved Intelligent Driver Model. *Proceedings of the 98th Transportation Research Board Annual Meeting*, Washington DC.
21. Wang J., Peeta* S., **He X.**, Zhao, J. (2019) Combined multinomial Logit modal split and paired combinatorial Logit traffic assignment model. *Proceedings of the 98th Transportation Research Board Annual Meeting*, Washington DC.
20. Hong* L., Ye, B., Yan H., Zhang H., Ouyang M., **He X.** (2019) Spatiotemporal Vulnerability Analysis of Railway System with Heterogeneous Train Flows. *Proceedings of the 98th Transportation Research Board Annual Meeting*, Washington DC.
19. Miralinaghi M., Peeta* S., **He X.**, Ukkusuri S. (2019) Controlling Bottleneck Queue with a Tradable Credit Scheme under Commuter Heterogeneity and Market Loss Aversion Behavior. *Proceedings of the 98th Transportation Research Board Annual Meeting*, Washington DC.
18. Sun* W., Du, H., Zhang X. **He X.** (2018) Traffic sign recognition method integrating multi-layer features and kernel extreme learning machine classifier. The 4th International Conference on Cloud Computing and Security (ICCCS), June 22-24, 2018, Hainan, China.
17. **He* X.**, Wu X. (2018) Speed advisory models for minimizing platoon energy consumption of mixed gasoline and electric vehicles in a connected vehicle environment. *Proceedings of the 97th Transportation Research Board Annual Meeting*, Washington DC.
16. Li M., Wu* X., **He X.**, Yu G., Wang Y. (2018) Energy-optimal signal control for electric vehicles under V2X environment. *Proceedings of the 97th Transportation Research Board Annual Meeting*, Washington DC.
15. Peeta* S., Song D.Y., Agrawal S., Guo Y., **He X.**, (2018) Design of Interactive Driving Simulator Experiments to Understand Drivers' Cognitive and Routing Behavior Under Real-Time Travel Information. The 15th International Conference on Travel Behavior Research (IATBR2018).
14. Miralinaghi M., Peeta* S., **He X.**, Ukkusuri, S. V. (2017). Managing Morning Commute Congestion with Tradable Credit Scheme Under Commuter Heterogeneity and Loss Aversion. *Proceedings of the 96th Transportation Research Board Annual Meeting*, Washington DC. (No. 17-01040).
13. Wang J., Kim Y.H., **He X.**, Peeta* S. (2017) Analytical model for information flow propagation wave under an information relay control strategy in a congested vehicle-to-vehicle communication environment. The *22nd International Symposium on Transportation and Traffic Theory*.

17. **He X.**, Zheng H., Peeta* S. (2015) Model and a solution algorithm for the dynamic resource allocation problem for large-scale transportation network evacuation. *Transportation Research Procedia* 9 (ISTTT), 56-70.
12. **He* X.**, Liu H.X., Peeta S. (2015) Generalized flow splitting rate model for day-to-day traffic assignment. *Transportation Research Procedia* 9 (ISTTT), 56-70.
11. Kim Y., Peeta* S., **He X.** (2015) Macroscopic modeling of spatiotemporal information flow propagation wave under vehicle-to-vehicle communications. *Proceedings of the 18th International IEEE Conference on Intelligent Transportation Systems (ITSC)*, 751-756. **Winner of the Best Paper Award (third place)**.
10. Kim Y., Peeta* S., **He X.** (2014) An analytical model to characterize the spatiotemporal propagation of information under vehicle-to-vehicle communications. *Proceedings of the 17th International IEEE Conference on Intelligent Transportation Systems (ITSC)*, 1142-1147.
9. **He* X.**, Liu H.X., Cao X. (2012) Estimating value of travel time and value of reliability using dynamic toll data. *Proceedings of the 91st Transportation Research Board Annual Meeting*, Washington DC.
8. **He* X.**, Liu H.X. (2010) A sparse solution to system-optimal congestion pricing problem. *Proceedings of the 89th Transportation Research Board Annual Meeting*, Washington DC.
7. Danczyk A., **He X.**, Liu* H.X. (2010). Uncovering the Perceived Cost Evolution in the Avoidance Phenomenon after the I-35W Bridge Collapse. *Proceedings of the 89th Transportation Research Board Annual Meeting*, Washington DC.
6. Chen* D., **He X.** (2010) An evaluation method for toll policy in transportation. *Proceedings of 2010 International Conference on E-Business and E-Government (ICEE)*, 618-621.
5. Jabari S., **He X.**, Liu* H.X. (2009) Responding to the unexpected: Model and solution strategy for combined dynamic evacuee routing and officer deployment. *Proceedings of the 88th Transportation Research Board Annual Meeting*, Washington DC.
4. **He X.**, Liu* H.X., Jabari S. (2008). A time-constrained heuristic algorithm for dynamic system optimal routing under emergency evacuation. *Proceedings of the 87th Transportation Research Board Annual Meeting*, Washington DC.
3. Liu* H.X., **He X.** (2008). A class of normative link flow control problems in transportation networks. *Proceedings of the 87th Transportation Research Board Annual Meeting*, Washington DC.
2. Liu* H.X., **He X.** (2007). Bi-level variational inequalities model and solution algorithm for link-based road pricing. *11th World Conference on Transportation Research*, June 24-28, 2007, Berkeley, CA.
1. Liu* H.X., **He X.**, Ban J. (2007) A cell-based dynamic system optimal model and its heuristic solution method for emergency evacuation. *Proceedings of the 86th Transportation Research Board Annual Meeting*, Washington DC.

B. Book chapters and editorial

7. Wu* X., **He X.,** Cao J. (2020) Advances in alternative fuel vehicles. *Transportation Research Part D* 85*,* 102408, Elsevier.
6. Sun W., Zhou X., Zhang X., **He X.** (2020) A Lightweight Neural Network Combining Dilated Convolution and Depthwise Separable Convolution. In: X. Zhang G. Liu M. Qiu, W. Xiang, T. Huang (Eds.) *Cloud Computing, Smart Grid and Innovative Frontiers in Telecommunications*, pp. 210-220. DOI:10.1007/978-3-030-48513-9_17, Springer.

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5. Peeta S., Liu H.X., **He X.** (2015) Chapter 3: Traffic Network Modeling. In: Dušan Teodorović (Eds.) *Handbook of Transportation*, pp. 25-41, Routledge.
4. Zhu S., Tilahun N., **He X.**, Levinson D.M. (2012) Chapter 3: Travel impacts and adjustment strategies of the collapse and the reopening of the I-35W Bridge. In: D.M. Levinson H.X. Liu M Bell (Eds.) *Network Reliability in Practice*, pp. 21-36, Springer.
3. Jabari S.E., **He X.**, Liu H.X. (2012) Chapter 14: Heuristic solution techniques for no-notice emergency evacuation traffic management. In: D.M. Levinson H.X. Liu M. Bell (Eds.), *Network Reliability in Practice*, pp. 241-259, Springer.
2. **He X.**, Chen A., Chaovalitwongse W.A., Liu H.X. (2009) Chapter 7: On the quadratic programming approach for hub location problems. In: W.A. Chaovalitwongse, K. Furman, and P. Pardalos (Eds.) *Optimization and Logistics Challenges in the Enterprise Part 2*, pp. 211-228, Springer.
1. Chaovalitwongse W.A., **He X.**, Chen A., (2009) Multi-quadratic integer programming: Models and applications. In: C.A. Floudas and P.M. Pardalos (Eds.) *Encyclopedia of Optimization Part 13*, pp. 2513-2520, Springer.

R. Research reports

7. Song D., **He X.**, Peeta S., Zhou X. (2015) Integrated Deployment Architecture for Predictive Real-Time Traffic Routing Incorporating Human Factors Considerations. NEXTRANS Center, Purdue University.
6. Song D., **He X.**, Peeta S. (2014) Field Deployment to Quantify the Value of Real-time Information by Integrating Driver Routing Decisions and Route Assignment Strategies. NEXTRANS Center, Purdue University.
5. Lee C., **He X.**, Peeta S., Chu C.-P., (2014) Highway Reservation System Design and Its Application to Freight Transportation. NEXTRANS Center, Purdue University.
4. Guo Y., **He X.**, Peeta S., Zheng H., Barrett T., Miller A., Weiss J. (2014) Internal Curing as a New Tool for Infrastructural Renewal: Reducing Repair Congestion, Increasing Service Life, and Improving Sustainability. NEXTRANS Center, Purdue University.
3. Liu H.X., **He X.**, Zhang S. (2012) Rethinking How We Manage Traffic to Reduce Emissions while Maintaining Mobility: A New Paradigm for Traffic Management. Initiative for Renewable Energy and the Environment Center for Transportation Studies, University of Minnesota.
2. Cao X., Liu H.X., **He X.**, Xu Z., Huang Y., Munnich L. (2012) Benefit and Cost Analysis of the I-394 MnPASS Program. Report No. 12-03, Intelligent Transportation Systems Institute, Center for Transportation Studies, University of Minnesota.
1. Liu H.X., Danczyk A, **He X.** (2011) Development of the next generation metro-wide simulation models for the Twin Cities' metropolitan area: Mesoscopic modeling. Report No. 11-03, Center for Transportation Studies, University of Minnesota.

PRESENTATIONS

Invited workshop/panel speaker

1. **He X.** (2023) Panel on *ITS for Transit*, ITS-NY Thirtieth Annual Meeting & Technology Exhibition: A Connected World. June 14-16, 2023.
2. **He X.** (2022) Panel on *Emerging Technologies and Trends*, ITS-NY Twenty-Ninth Annual Meeting &

Technology Exhibition. June 16-17, 2022.

3. **He X.** (2021) NSF CAREER Proposal Coaching Session for Civil Infrastructure Systems Program. June 15, 2021.
4. **He X.** (2019) Workshop on *Precise Task Control in Teleoperation*. The 5th International Conference on Artificial Intelligence and Security, New York University, July 26-28, New York, NY.
5. **He X.** (2018) TianYuan Workshop Series, gave a four-day short course on *Mathematical Modeling and Numerical Experiments for Network Analysis and Traffic Control in Connected-Vehicle Systems*. Nanjing University of Aeronautics and Astronautics, Nanjing, China, July 13-16.

Invited talk

6. **He X.** (2024) Advances and challenges in enhancing the resilience of connected transportation systems, School of Mathematics, Nanjing University, China, Nov. 2, 2024.
7. **He X.** (2024) AI-Enabled Heterogeneous Information Provision for Congestion Mitigation based on Behavioral Economics. School of System Science, Beijing Jiaotong University, Beijing China, June 6, 2024.
8. **He X.** (2024) Enhancing CAV Intersection Crossings Reliability: A Mechanical Vibration Theoretic Approach. School of Economics and Management, Dalian University of Technology, Dalian, China, June 3, 2024.
9. **He X.** (2024) AI-Enabled Heterogeneous Information Provision for Congestion Mitigation based on Behavioral Economics. School of Management & Engineering, Nanjing University, Nanjing China, May 31, 2024.
10. **He X.** (2024) AI-Enabled Heterogeneous Information Provision for Congestion Mitigation based on Behavioral Economics. Young Scholar Seminar Series, School of Transportation, Southeast University, Nanjing China, May 30, 2024.
11. **He X.** (2024) Pathway to Smart Transportation: Career Choices & Research Opportunities. Lecture Series for Undergraduate Forum. Department of Mathematics, Nanjing University, Nanjing China, May 29, 2024.
12. **He X.** (2024) Correlated CAV En-route Routing for Congestion Mitigation: A two-way deep reinforcement learning approach. "Fellow Traveler" Academic Forum, College of Transportation Engineering, Tongji University, Shanghai, China, May 27, 2024.
13. **He X.** (2022) Investigating the Impacts of Traffic Forecast Information on Dynamic Transportation Network Equilibria. University of Massachusetts Transportation Center Seminar Series, University of Massachusetts Amherst, March 3, 2022
14. **He X.** (2019) Fostering the resilience of connected transportation systems. Rensselaer School of Science Dean's Seminar Series, November 20, 2019.
15. **He X.** (2018) Modeling network resilience of transportation systems. Seminar in Department of Mathematical Sciences, Rensselaer Polytechnic Institute, October 24, 2018.
16. **He X.** (2018) Multiclass traffic assignment model for mixed traffic flow of connected autonomous and human-driven vehicles. The 18th COTA International Conference of Transportation Professionals, Tsinghua University, Beijing, China, July 5-8.
17. **He X.** (2017) Energy-optimal platoon speed advisory for mixed traffic of gasoline and electric vehicles in a connected and automated system. SUNY Polytechnic Institute, NY, Sept. 26.
18. **He X.** (2017) Macroscopic model for spatiotemporal information propagation wave in a congested vehicle-

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to-vehicle communication environment. The 17th COTA Conference International Conference of Transportation Professionals, Tongji University, Shanghai, China, July 7-9.

19. **He X.** (2017) Analytical model for information flow propagation wave under an information relay control strategy in a congested vehicle-to-vehicle communication environment. Management Science Seminar, School of Management and Engineering, Nanjing University, China, July 5.
20. **He X.** (2017) Energy-optimal speed advisory for a platoon of mixed gasoline and electric vehicles on signalized urban roads. Jiangsu Provincial Key Laboratory for Numerical Simulation of Large Scale Complex Systems, Nanjing Normal University, China, July 4.
21. **He X.** (2016) Platoon formation control for connected autonomous vehicles with variable communication topology. University of Michigan Transportation Research Institute, Dec. 3.
22. **He X.** (2016) Traffic evolution models and their applications in smart cities. Department of Systems Engineering, Huazhong University of Science and Technology, China, Nov. 24.
23. **He X.** (2016) Mathematical modeling of information propagation in a connected vehicle system. Jiangsu Provincial Key Laboratory for Numerical Simulation of Large Scale Complex Systems, Nanjing Normal University, China, Nov. 22.
24. **He X.** (2016) Traffic evolution models and their applications in smart cities. Mathematics Department, Nanjing University, China, Nov. 21.
25. **He X.** (2015) Model and a solution algorithm for the dynamic resource allocation problem for large-scale transportation network evacuation. TFTC Webinars, ISTTT21 Series, Nov. 13.
26. **He X.** (2015) Energy-optimal speed control for connected vehicles on signalized arterials. Chongqing University of Posts and Telecommunications, China, Jun. 29.
27. **He X.** (2015) Pre-disaster investment decisions for strengthening the Chinese railway system to earthquakes. DIMACS Special Program–Mathematics of Planet Earth: Workshop on Natural Disasters, Georgia Institute of Technology, May 13-15.
28. **He X.** (2015) Traffic flow evolution based on behavioral theory. Department of Civil and Environmental Engineering, Utah State University, Mar. 23.
29. **He X.** (2014) Energy-optimal speed control for plug-in electric vehicles on signalized arterials. ITE Seminar, The Lily School of Civil Engineering, Purdue University, Sept. 9.
30. **He X.** (2010) Modeling the traffic flow evolution process after an unexpected network disruption. Department of Civil and Environmental Engineering, University of Maryland College Park, Oct. 22.
31. **He X.** (2010) Modeling the traffic flow evolution process after an unexpected network disruption. School of Civil and Environmental Engineering, Cornell University, Sept. 23.

Conference presentations

32. Ma X., **He X.** (2024) Providing real-time en-route suggestions to CAVs for congestion mitigation: A two-way deep reinforcement learning approach. *INFORMS Annual Meeting*, Seattle, WA, October 20, 2024.
33. Ma X., **He X.** (2024) Real-time en-route suggestions to CAVs for congestion mitigation: A two-way deep reinforcement learning approach. The *25th International Symposium on Transportation and Traffic Theory (ISTTT)*, July 15-17, 2024, Ann Arbor, Michigan.
34. Zhu H., **He X.** (2024) Who is ready to embrace accessible drone delivery in rural areas? Insights from Large Language Model (LLM)-Driven Willingness Analysis. ITS-NY Thirty-First Annual Meeting &

Technology Exhibition: "Guardians of Transportation", Saratoga Springs, NY, June 13-14, 2024.

35. Ma X., **He X.** (2024) Correlated CAV En-route Routing for Congestion Mitigation. *The 103rd Transportation Research Board Annual Meeting*, Jan. 7-11, Washington DC. TRBAM-24-04110.
36. Ma X., **He X.**, Holguin-Veras H. (2024) Optimizing On-Street Parking Allocation for Multiple Users Considering Double Parking Impacts. *The 103rd Transportation Research Board Annual Meeting*, Jan. 7-11, Washington DC. TRBAM-24-04163.
37. Zhu H., **He X.**, Wang Z. (2024) Analyzing Equity in Truck-Drone Cooperative Delivery for Rural Areas. *The 103rd Transportation Research Board Annual Meeting*, Jan. 7-11, Washington DC. TRBAM-24-05112.
38. Ma X., **He X.** (2023) Enhancing Real-Time Bus Arrival Time Prediction with a Machine Learning-Driven Markov Process Approach. *INFORMS Annual Meeting*, Phoenix, AZ, October 15-18, 2023.
39. Yu J., **He X.**, Gao J. (2023) Metastability in the Evolution of Congested Freeway Traffic. The *2023 International Conference on Smart Transportation and Future Mobility* (CSTFM 2023), Changsha, China, July 28-30, 2023.
40. Ma X., **He X.**, Holguin-Veras H. (2023) Optimal Multiuser On-Street Parking Allocation for Large Cities. *2023 New York State Association of Metropolitan Planning Organizations (NYSAMPO) Conference*, Syracuse, NY, May 9-10, 2023.
41. Wang J., **He X.**, Peeta S., Wang W., (2023) Globally convergent line search algorithm with Euler-based step size-determination method for continuous network design problem. *The 102nd Transportation Research Board Annual Meeting*, Jan. 8-12, Washington DC. TRBAM-23-04085.
42. Seilabi, S., Pourgholamali M., Miralinaghi M, de Almeida Correia G., **He X.**, Labi S. (2023) Transportation Networks for Autonomous, Connected, and Electrified Vehicles, *The 102nd Transportation Research Board Annual Meeting*, Jan. 8-12, Washington DC. TRBAM-23-03465.
43. Yang X., Wang C., **He X.**, Zhang H., Xu G. (2023) Location optimization for community parcel lockers based on bi-level programming. CICTP2023.
44. Ma X., **He X.,** Holguin-Veras H. (2022) On-street parking space allocation for passenger and commercial vehicles. *INFORMS Annual Meeting*, Indianapolis, IN, October 16-19, 2022.
45. Ma X., **He X.** (2022) Within-day dynamic traffic equilibrium with heterogeneous information considering strategic forecasting of travel time. *The 4th Bridging Transport Researchers Conference,* online.
46. Ma X., **He X.** (2022) Within-day Dynamic Traffic Assignment for Multi-class Travelers with Instantaneous and Forecast Information. *The 101st Transportation Research Board Annual Meeting*, Jan. 9-13, Washington DC.
47. **He X.,** Wei Y., Holguin-Veras J. (2022) Brownian bridge-based imputation technique for truck energy consumption estimation using low-resolution GPS data. *The 101st Transportation Research Board Annual Meeting*, Jan. 9-13, Washington DC.
48. Wang P., Wu X., **He* X.** (2022) Vibration theory approach to assessing the vulnerability of connected automated vehicle platoon under periodic cyberattacks. *The 101st Transportation Research Board Annual Meeting*, Jan. 9-13, Washington DC.
49. Wang Z., **He X.**, Zhou Z. (2022) Integrated and Equitable Same Day Delivery in Rural Area with Drones. *The 101st Transportation Research Board Annual Meeting*, Jan. 9-13, Washington DC.
38. Wang P., Tao Z., Wu X., **He X.,** Zhou B. (2021) Formulating Connected Automated Vehicle Dynamics

under Cyberattacks based on Spring-Mass System. *20th and 21st Joint COTA International Conference of Transportation Professionals*, Dec. 16-19, 2021, Xi'an, China.

50. Ma X., **He X.** (2021) Who are the beneficiaries of predictive travel information? Modeling dynamic stochastic user equilibrium with diverse pre-trip information. *INFORMS Annual Meeting*, Anaheim, CA, October 24-27, 2021.
51. Yu J., Gao J., **He X.** (2021) Metastability in the evolution of congested freeway traffic. *INFORMS Annual Meeting*, Anaheim, CA, October 24-27, 2021.
52. Wang P., Wu X., **He X.** (2021) Characterizing connected and automated vehicle platooning vulnerability under periodic perturbation. *24th IEEE International Conference on Intelligent Transportation (IEEE ITSC2021)*, Sept. 19-22, 2021, Indianapolis, IN, US.
53. **He X.,** Wei Y., Holguin-Veras J. (2021) Brownian bridge-based imputation technique for truck energy consumption estimation using low-resolution GPS data. *Pan American Congress on Transportation and Logistics (PANAM2021)*, Lima, Peru, August 11-13, 2021
54. Ma X., **He X.** (2021) Period-to-period Tolling Scheme for Mixed Traffic of Electric and Gasoline Vehicles with Time-varying Flow Composition. *100th TRB Annual Meeting,* Virtual, Jan. 25-29, 2021.
55. **He X.**, Wei Y. (2020). Investigating the stability of cooperative intersection crossing of connected autonomous vehicles. *INFORMS Annual Meeting,* Virtual, Nov. 8-11, 2020.
56. Ma X., **He X.** (2020) Period-to-period Tolling Scheme for Mixed Traffic of Electric and Gasoline Vehicles with Time-varying Flow Composition. *INFORMS Annual Meeting,* Virtual, Nov. 8-11, 2020
57. Ma X., **He X.** (2020) Multiclass Traffic Evolution Model for Electric and Gasoline Vehicles with Bi-Objective Path Choice Behavior. *99th Transportation Research Board Annual Meeting*, Jan. 12-16, 2020, Washington DC.
58. Wang J., Peeta S., **He X.** (2020) Multiclass Traffic Assignment Model for Mixed Traffic Flow of Human-Driven Vehicles and Connected and Autonomous Vehicles. *99th Transportation Research Board Annual Meeting*, Jan. 12-16, 2020, Washington DC.
59. Wang P., Wu X., **He X.**, Yu G. (2020) Analyzing Cyberattack Effects on Connected Autonomous Vehicles Using a Cooperative Intelligent Driver Model. *99th TRB Annual Meeting*, Jan. 12-16, Washington DC.
60. Conton C., **He X.** (2019) Eco-driving strategy for connected autonomous vehicles encountering truck platoons merging on the highway. *UTRC's Transportation Technology Symposium*, New York Institute of Technology, Nov. 1st, 2019.
61. **He X.**, Wei Y. (2019) Virtual platooning control for cooperative intersection crossing of connected autonomous vehicles. *INFORMS Annual Meeting,* Seattle, WA*,* Oct. 20-23.
62. **He X.,** Wang P., Wu X. (2019) Characterizing data falsification effects on connected autonomous vehicle platoons using a forced vibration equation. *INFORMS Annual Meeting,* Seattle, WA*,* Oct. 20-23.
63. **He X.**, Wang P. (2019) On the stability of connected vehicle platoon under cyberattack. *5th International Conference on Artificial Intelligence and Security*, July 26-28, 2019, New York University, NY, USA.
64. Wang P., **He X.**, Wu X., Yu G., Chu, L. (2019) A control approach to mitigate cyberattacks on a connected vehicle platoon using an improved Intelligent Driver Model. *98th TRB Annual Meeting*, Jan. 13-17, 2019, Washington DC.
65. Wang J., Peeta S., **He X.**, Zhao, J. (2019) Combined multinomial Logit modal split and paired

combinatorial Logit traffic assignment model. *98th TRB Annual Meeting*, Jan. 13-17, Washington DC.

66. Hong L., Ye, B., Yan H., Zhang H., Ouyang M., **He X.** (2019) Spatiotemporal Vulnerability Analysis of Railway System with Heterogeneous Train Flows. *98th TRB Annual Meeting*, Jan. 13-17, Washington DC.
67. Miralinaghi M., Peeta S., **He X.**, Ukkusuri, S. (2019) Controlling Bottleneck Queue with a Tradable Credit Scheme under Commuter Heterogeneity and Market Loss Aversion Behavior. *98th TRB Annual Meeting*, Jan. 13-17, 2019, Washington DC.
68. **He X.**, Jiang C., Gao J. (2018) Early warning signal for urban congestion. *INFORMS Annual Meeting,* Phoenix, AZ, Nov. 4-7.
69. **He X.**, Wu X. (2018) Speed advisory models for minimizing platoon energy consumption of mixed gasoline and electric vehicles in a connected vehicle environment. *97th TRB Annual Meeting.*
70. Wang J., Gong, S., Peeta S., **He X.** (2018) Cooperative car-following control protocol for a platoon of connected and autonomous vehicles. *INFORMS Annual Meeting,* Phoenix, AZ, Nov. 4-7.
71. Yang X., **He X.** (2018) Dynamic bus allocation optimization in multimodal evacuation modeling. *18th COTA International Conference of Transportation Professionals*, Tsinghua University, Beijing, China, July 5-8.
72. Yang X., **He X.**, Ban, J. (2018) Bus schedule optimization for multimodal emergency evacuation. *7th International Symposium on Dynamic Traffic Assignment (DTA): Smart Transportation*, June 6-8, 2018, Hong Kong.
73. Li M., Wu X., **He X.**, Yu G. Wang Y. (2018) Energy-optimal signal-control for electric vehicles under V2X environment. *97th TRB Annual Meeting.*
74. Wang J., Kim Y.H., **He X.**, Peeta S. (2018) Information flow propagation wave model based on an information relay control strategy under congested V2V communication. *97th TRB Annual Meeting.*
75. Sun W., Du, H., Zhang X. **He X.**, (2018) Traffic sign recognition method integrating multi-layer features and kernel extreme learning machine classifier. *4th International Conference on Cloud Computing and Security, ICCCS)*, June 22-24, 2018, Hainan, China.
76. Peeta S., Song D.Y., Agrawal, S., Guo Y., **He X.**, (2018) Design of interactive driving simulator experiments to understand drivers' cognitive and routing behavior under real-time travel information. *15th International Conference on Travel Behavior Research (IATBR2018)*, Santa Barbara, CA, July 15-20.
77. Arrieta-Prieto M., Rivera-Gonzalez C., **He X.** (2018) Investigating the robustness of toll pricing policy under stochastic demand. *Pan American Congress on Transportation and Logistics (PANAM2018)*, Medellín, Colombia, September 25-28, 2018.
78. Yang X., **He X.** (2017) Bus schedule optimization for multimodal emergency evacuation. *INFORMS Annual Meeting*, Houston, Oct. 22-25.
79. Wang J., Peeta S., **He X.** (2017) Optimal deployment of autonomous vehicle lanes under network equilibrium. *INFORMS Annual Meeting*, Houston, Oct. 22-25.
80. Wang J., Kim Y.H., **He X.**, Peeta S. (2017) Analytical model for information flow propagation wave under an information relay control strategy in a congested vehicle-to-vehicle communication environment. *22nd International Symposium on Transportation and Traffic Theory*, Chicago, July 24-26, 2017.
81. **He X.**, Wang J., Liu H.X., Peeta S. (2017) Day-to-day dynamic signal timing plan based on a flow splitting model for single-destination networks. *96th TRB Annual Meeting.*

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82. **He X.**, Zheng H., Peeta S., Li Y. (2017) Network design model to integrate shelter assignment with contraflow operations in emergency evacuation planning. *96th TRB Annual Meeting.*
83. Wang J., **He X.**, Peeta S. (2017) Revised sensitivity analysis-based linear approximation method for user equilibrium problem under a large-scale perturbation. *96th TRB Annual Meeting.*
84. Wang J., **He X.,** Peeta S., Yang X. (2017) Perimeter control strategy for traffic events affected region: A feedback approach based on network exist function. *96th TRB Annual Meeting*.
85. Sun W., **He X.**, Peeta S., Zhang X. (2017) A real-time fatigue driving recognition method incorporating contextual features and two fusion levels. *96th TRB Annual Meeting.*
86. Miralinaghi M., Peeta S., **He X.**, Ukkusuri S. (2017) Managing morning commute with tradable credit scheme under commuters heterogeneity and loss aversion. *96th TRB Annual Meeting.*
87. **He X.**, Peeta S. (2016) Doubly dynamic traffic assignment model based on regional macroscopic fundamental diagrams. *INFORMS Annual Meeting,* Nashville, Nov. 13-16, 2016.
88. **He X.**, Zhang C., Peeta S. (2016) Critical component strengthening strategies to enhance the resilience of interdependent infrastructure systems. *INFORMS Annual Meeting,* Nashville, Nov. 13-16, 2016.
89. Agrawal S., **He X.**, Peeta S., Pasupathy R. (2016) Simulation-based optimization with adaptive sampling strategy for network-wide traffic management and control. *INFORMS Annual Meeting*, Nashville, Nov. 13-16, 2016.
90. Sangoi S., **He X.**, Peeta S. (2016) Modeling and enhancing the resilience of complementary transportation systems. *INFORMS Annual Meeting,* Nashville, Nov. 13-16, 2016.
91. Wang J., **He X.**, Kim Y.H., Peeta S. (2016) Modeling spatiotemporal propagation of information in a connected vehicle system with the consideration of communication capacity. *INFORMS Annual Meeting,* Nashville, Nov. 13-16, 2016.
92. Wang J., **He X.**, Yang X., Peeta S. (2016) Feedback-based traffic signal perimeter control for incident affected urban networks. *INFORMS Annual Meeting,* Nashville, Nov. 13-16, 2016.
93. Li Y., Li., Z., Peeta S., **He X.**, Sun F., Feng H. (2016) Finite-time platooning formation control protocols for autonomous vehicles with time-variant leader and communication topology. *INFORMS Annual Meeting,* Nashville, Nov. 13-16, 2016.
94. **He X.**, Yan Y., Hong L., Ouyang M., Peeta S. (2016) Pre-disaster investment model for strengthening the Chinese railway system under earthquakes. *95th TRB Annual Meeting.*
95. Wang J., **He X.**, Peeta S. (2016) Sensitivity analysis based approximation models for day-to-day link flow evolution process. *95th TRB Annual Meeting.*
96. Guo Y., **He X.**, Peeta S., Weiss W. (2016) Internal curing for concrete bridge decks: Integrating a social cost analysis in evaluating the long-term benefit. *95th TRB Annual Meeting.*
97. Zheng H., **He X.**, Li Y., Peeta S. (2016) Traffic equilibrium and charging facility locations for electric vehicles. *95th TRB Annual Meeting.*
98. Zheng J., Liu H., **He X.** (2016) Fuel-optimal speed advisory using historical driving data. *95th TRB Annual Meeting.*
99. **He X.**, Zheng H., Peeta S. (2015) Modeling network equilibrium with mixed flows of electric and gasoline vehicles. *INFORMS Annual Meeting,* Philadelphia, Nov. 1-4, 2015.
100. Zheng H., Peeta S., **He X.** (2015) Electric vehicle routing and network design of charging station locations. *INFORMS Annual Meeting,* Philadelphia, Nov. 1-4, 2015.

101. Kim Y.H., Peeta S., **He X.** (2015/2016) Macroscopic modeling of spatiotemporal information flow propagation wave under vehicle-to-vehicle communications. *INFORMS Annual Meeting,* Philadelphia, Nov. 1-4, 2015, and *95th TRB Annual Meeting.*

102. Wang J., **He X.**, Peeta S. (2015) A modified sensitivity analysis method for user equilibrium. *INFORMS Annual Meeting,* Philadelphia, Nov. 1-4, 2015.

103. Hong L., Ouyang M., **He X.** (2015) Vulnerability Modeling and Analysis of Complementary Transportation Systems. *INFORMS Annual Meeting,* Philadelphia, Nov. 1-4, 2015.

104. Li Y., Li K, Zhang L., Peeta S., **He X.**, Zheng H., Zheng T., Li Y. (2015) Multi-agent based formation control of connected autonomous vehicles. *INFORMS Annual Meeting,* Philadelphia, Nov. 1-4, 2015.

105. **He X.,** Zheng H., Peeta S. (2015) Modeling the dynamic resource allocation problem for large-scale transportation network evacuation. The *21st International Symposium on Transportation and Traffic Theory (ISTTT)*, Kobe, Japan, Aug. 5-7, 2015.

106. **He X.,** Liu H.X., Peeta S. (2015) A generalized flow splitting rate model for day-to-day traffic assignment. *21st International Symposium on Transportation and Traffic Theory (ISTTT)*, Kobe, Japan, Aug. 5-7, 2015.

107. Kim Y.H., Peeta S., **He X.** (2015) Macroscopic modeling of spatiotemporal information flow propagation wave under vehicle-to-vehicle communications. *18th IEEE Conference on Intelligent Transportation Systems (ITSC)*, Canary Islands, Spain, Sept. 15-18, 2015.

108. Sun W., Peeta S., **He X.** (2015) Dynamic fatigue driving recognition based on double-level fusion. *6th International Conference on Applied Human Factors and Ergonomics*, Las Vegas, Nevada, USA, July 26-30, 2015.

109. Peeta S., Song D., **He X.**, Agrawal S., Guo Y., Kim Y.H. (2015) Design of interactive driving simulator experiments for real-time route guidance that capture human factors considerations. *6th International Conference on Applied Human Factors and Ergonomics*, Las Vegas, Nevada, USA, July 26-30, 2015.

110. Wu X., **He X.**, Yu G., Harmandayan A. (2015) Energy-optimal speed control for electric vehicles on signalized arterials. *94th TRB Annual Meeting.*

111. Hong L., Ouyang M., Peeta S., **He X.**, Yan Y. (2015) Vulnerability assessment and mitigation for the Chinese railway system under floods. *94th TRB Annual Meeting.*

112. **He X.**, Peeta S. (2014/2015) A marginal utility day-to-day traffic assignment model. *2014 INFORMS Annual Meeting* and *94th TRB Annual Meeting.*

113. Kim Y., Peeta S., **He X.** (2014/2015) Modeling the spatiotemporal propagation of information in vehicle-to-vehicle communications. *2014 INFORMS Annual Meeting* and *94th TRB Annual Meeting.*

114. **He X.**, Zheng H., Peeta S. (2014) Modeling the dynamic resource allocation problem for large-scale transportation network evacuation. *INFORMS Annual Meeting.*

115. Kumar A., **He X.**, Peeta S. (2014) Day-to-day dynamics in a traffic network under bounded rationality. *INFORMS Annual Meeting.*

116. Wang J., **He X.**, Peeta S. (2014) Approximation methods for a link-based day-to-day traffic assignment model. *INFORMS Annual Meeting.*

117. Hong L., **He X.,** Yan Y., Ouyang M., Peeta S. (2014) Pre-disaster investment decision for the Chinese railway system under earthquake. *INFORMS Annual Meeting.*

118. Guo Y., **He X.**, Peeta S. (2014) Analytical model for evaluating the long-term benefits of internal curing. *INFORMS Annual Meeting.*

119. Kim Y., Peeta S., **He X.** (2014) An analytical model to characterize the spatiotemporal propagation of information under vehicle-to-vehicle communications, *17th IEEE Conference on Intelligent Transportation Systems (ITSC)*, Qingdao, China, Oct. 8-11, 2014.

120. **He X.**, Peeta S. (2014) A day-to-day traffic flow evolution model based on marginal decision rule. *5th International Symposium on Dynamic Traffic Assignment*, June 17-19, 2014, Salerno, Italy.

121. **He X.**, Peeta S. (2013/2014) Modeling dynamic resource allocation for transportation network evacuation. *2013 INFORMS Annual Meeting* and *93rd TRB Annual Meeting*.

122. **He X.**, Peeta S. (2013) Marginal cost based day-to-day traffic assignment. *INFORMS Annual Meeting*.

123. Agrawal S., **He X.**, Peeta S. (2013) Estimating short-term path travel time reliability using decentralized vehicle-to-vehicle information system. *INFORMS Annual Meeting*.

124. **He X.**, Liu H.X. (2012/2013) Optimal speed trajectory for fuel consumption reduction on signalized arterials. *2012 INFORMS Annual Meeting* and *92nd TRB Annual Meeting*.

125. **He X.**, Liu H.X. (2012/2013) A class of flow splitting models for day-to-day traffic assignment. *2012 INFORMS Annual Meeting* and *92nd TRB Annual Meeting*.

126. Di X., **He X.**, Liu H.X. (2012/2013) Braess Paradox under boundedly rational user equilibria: Properties on the Paradox Network. *2012 INFORMS Annual Meeting* and *92nd TRB Annual Meeting*.

127. Burris M., Yin K., Huang C., Brimley B. Wei D., Devarasetty P., Spiegelman C., **He X.** (2013) How do travelers perceive and value travel time reliability. *92nd TRB Annual Meeting*.

128. **He X.**, Liu H.X., Cao, X. (2012) Estimating value of travel time and value of reliability using dynamic toll data. *91st TRB Annual Meeting*, and *23rd Annual Meeting of CTS Transportation Research Conference*, Saint Paul, MN.

129. Danczyk A., **He X.**, Liu H.X. (2011) Uncovering the perceived cost evolution in the avoidance phenomenon after I-35W Bridge collapse. *90th TRB Annual Meeting*.

130. **He X.**, Liu H.X. (2010) Modeling the day-to-day traffic evolution process after an unexpected network disruption. *3rd International Symposium on Dynamic Traffic Assignment*, July 29-31, 2010, TakayaMa Japan.

131. **He X.**, Liu H.X. (2010) Modeling the traffic flow evolution process after an unexpected network disruption. *89th TRB Annual Meeting*.

132. **He X.**, Liu H.X. (2010) A sparse solution to system-optimal congestion pricing problem. *89th TRB Annual Meeting*.

133. Zhu S., **He X.**, Liu H.X., Levinson D.M. (2009) How far is traffic from user equilibrium? An empirical test of Wardrop's first principle. *INFORMS Annual Meeting*.

134. **He X.**, Jabari S., Liu H.X. (2009) Modeling day-to-day traffic equilibration after a network disruption. *88th TRB Annual Meeting*.

135. **He X.**, Liu H.X., He B.S. (2009) An inverse variational inequality model for road pricing with bounded flows. *20th International Symposium on Mathematical Programming*.

136. Liu H.X., **He X.** (2007/2008) A class of normative link flow control problems in transportation networks. *2007 INFORMS Annual Meeting*, Seattle, and *87th TRB Annual Meeting*.

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137. **He X.**, Liu H.X. (2007) Bi-level variational inequalities and solution algorithms for link-based road pricing. *11th World Conference on Transport Research (WCTR)*, Berkeley, CA.

138. **He X.**, Liu H.X. (2007) Variational inequality model for road pricing with environmental constraints. *INFORMS Annual Meeting*.

139. Liu H.X., **He X.**, Ban J. (2006/2007) A cell-based dynamic system optimal model and its heuristic solution method for emergency evacuation. *2006 INFORMS Annual Meeting* and *86th TRB Annual Meeting*.

140. Liu H.X., **He X.**, He B.S. (2006/2007) Method of successive weighted averages (MSWA) and self-regulated averaging schemes for solving stochastic user equilibrium problem. *2006 INFORMS Annual Meeting* and *86th TRB Annual Meeting*.

141. Liu H.X., **He X.**, Recker W. (2006) Estimation of the time-dependency of values of travel time and its reliability from loop detector data. *85th TRB Annual Meeting*.

PROFESSIONAL SERVICES

Editorial Board Member

Transportation Research Part B, 2019~present.

Subject Editor

Nonlinear Dynamics (Q1 journal in engineering systems), 2024~present

Associate Editor

Frontiers in Future Transportation, 2020~present

Special Issue Editor

- Transportation Research Part D, on "Advances in Alternative Fuel Vehicles," 2018~2020.
- Sustainability, on "Sustainable Transportation and Traffic in Smart Cities," 2020~2023.
- Journal of Advanced Transportation, on "Electric Vehicles: Planning and Operations," 2021~ 2023.
- Automotive Innovation, on "Feature Topic on Intelligent Transportation Systems," 2024~present.
- Multimodal Transportation, on "Advances in Connected and Autonomous Transportation: Revolutionizing Operation, Management, and Planning," 2025~present
- Transportation Research Part B, on "Methodological Advances for Connected and Autonomous Transportation Systems: Revolutionizing Operation, Management, and Planning," 2025~present

Journal Paper Referee

- **Transportation Journals**
  Transportation Research Parts A, B, C, D, E; Transportation Science; Transportmetrica Parts A, B; IEEE Transactions on Intelligent Transportation Systems; IEEE Transactions on Vehicular Technology; IEEE Transactions on Mobile Computing; IET Intelligent Transport Systems; Transportation Safety & Security; Transportation; International Journal of Transportation Science and Technology; Journal of Intelligent Transportation Systems; Journal of Advanced Transportation; Multimodal Transportation.
- **Operations Research Journals**
  Journal of Optimization Theory and Applications; Journal of Global Optimization; Journal of Management Science and Engineering; Journal of Applied Mathematics and Computing; Computers & Industrial Engineering; Expert Systems With Applications; Networks and Spatial Economics; Optimization Letters.

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- **Civil Engineering and Multidisciplinary Journals**
  Automatica; Applied Sciences; Computer-Aided Civil and Infrastructure Engineering; Nonlinear Analysis: Hybrid Systems; PLOS ONE; Physica A; KSCE Journal of Civil Engineering; Multimedia Tools and Applications; Nature Computational Science; Reliability Engineering & System Safety; Scientific Reports; IEEE Transactions on Cybernetics; IEEE Transactions on Industrial Electronics; IEEE Transactions on Intelligent Vehicles; Intelligence & Robotics, Vehicular Communications.
- **Energy and Sustainability Journals**
  Journal of Cleaner Production; Energies; Sustainability; IEEE Transactions on Transportation Electrification.

Committee member

- Standing Committee on Transportation Network Modeling (AEP40), TRB, 2021~present
- ITS-NY Board of Directors, 2019~2022
- COTA Best Dissertation Award Committee (2018)

Conference committee chair

- **World Transport Convention:** Technical Committee of Transportation Network Design, 2024~present

Conference workshop

- Chair, "Precise Task Control in Tele-operation," the Fifth International Conference on Artificial Intelligence and Security (ICAIS2019)

Conference session chair

- TRB annual Meeting, 2025, AEP40 Lectern Session: "Network Modeling Problems for Commercial Fleets."
- INFORMS Annual Meeting, 2021, "Data-driven Modeling and Analytics in Infrastructure Systems in Response to Disturbances."
- INFORMS Annual Meeting, 2020, "Pricing and Incentive Strategies Leveraging Emergent Technologies"
- INFORMS Annual Meeting, 2013, 2014, 2016.

Conference committee member

- **World Transport Convention** Technical Committee (Transportation Network Design) 2018~2023
- **Organizing Committee Member,** the 2nd International Congress and Expo on Civil and Structural Engineering (EUROCIVIL2025)—Amsterdam, Netherlands, May 12-14, 2025.
- **Organizing Committee Member,** International Congress and Expo on Civil and Structural Engineering (EUROCIVIL2024)—Edinburgh, Scotland, June 13-15, 2024.
- **Technical Program Committee,** The Second International Conference on Artificial Intelligence, Information Processing and Cloud Computing (AIIPCC2021)—HangZhou China, June 26-28, 2021.
- **Scientific Committee Member,** The International Conference on Civil Engineering Fundamentals and Applications (ICCEFA'20)—London, England, September 7-8, 2020; and ICCEFA'21—Seoul, South Korea, Nov 21-23, 2021.
- **Scientific Committee Member,** The 5th International Conference on Civil Structural and Transportation Engineering (ICCSTE'20)—Niagara Falls, June 11-13, 2020.
- **Academic Committee Member,** 2019 International Conference on Intelligent Transportation and Vehicle Engineering (ICITVE 2019)—Chongqing China, December 6-8, 2019.
- **International Academic Committee Member**, The 19th COTA International Conference of Transportation Professionals (CICTP2019)—Southeast University, Nanjing, China, July 6-8, 2019.
- **Area Editor,** The 17th COTA International Conference of Transportation Professionals (CICTP2017)—

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Tongji University, Shanghai, China, 2017.

Conference paper referee

International Symposium on Transportation and Traffic Theory (ISTTT)
Transportation Research Board Annual Meeting (TRB)
IEEE Conference on Intelligent Transportation Systems (ITSC)
International Symposium on Multimodal Transportation (ISMT)
International Conference of Chinese Transportation Professionals (CICTP)
World Transport Convention (WTC)

Proposal referee

- NSF panelist (ENG/CMMI)
  - CIS (2023)
  - CPS (2019, 2024)
  - MRI (2024)
  - DCSD (2024)
- NSF panelist (SBE)
  - SAI (2022, 2023)
- NSF ad-hoc reviewer (ENG/CMMI) (2022)
- Proposal reviewer for University Transportation Centers:
  - TransInfo, Tier I UTC (2017)
  - NCST Center, National UTC (2019, 2020)
  - STRIDE Center, Regional UTC (2019)
  - PacTrans Center, Regional UTC (2024)
  - Pacific Southwest Region (PSR) UTC (2024)
- Swiss National Science Foundation—Switzerland (2024)
- Research Grants Council of Hong Kong (2021, 2022, 2023, 2024)
- Innovation and Technology Commission, Hong Kong (2024)
- FONDECYT Program—Chile (2020)
- University of California Institute of Transportation Studies (2020, 2023)

Professional membership

- Institute for OR and the Management Sciences (INFORMS) Member, 2006~present
- Institute of Transportation Engineers (ITE) Member, 2011~2013, 2023~ present
- American Society of Civil Engineering (ASCE) Member, 2017~2019
- COTA Member, 2021~present