



Guoyuan Wu, Ph. D.

1084 Columbia Ave, Riverside, CA 92507, U.S.A.

Email: guoyuan.wu@ucr.edu Phone: +1-510-387-6250 (c) or +1-951-827-8521 (w)

Website: <https://profiles.ucr.edu/app/home/profile/guoyuanw>

EDUCATION

Ph.D., Mechanical Engineering, University of California at Berkeley, 2010

Advisor: Prof. Masayoshi Tomizuka

Thesis: “Development of AVL-based Adaptive Signal Control (ASC) System and Its Applications”

M.S., Thermal Engineering, Tsinghua University, China, 2004

Advisor: Prof. Donghai Li

Thesis: “PID Controller Design for Two-Inputs-Two-Outputs (TITO) Systems in Thermal Processes”
(in Chinese)

B.S., Energy Engineering, Zhejiang University, China, 2001

Advisor: Prof. Junhu Zhou

Thesis: “Research on Characteristics of Desulphurization Sorbents” (in Chinese)

EMPLOYMENT

- 07/2022 – Present **University of California at Riverside**
Adjunct Professor in Electrical and Computer Engineering (ECE) Department and
Full Researcher in College of Engineering – Center for Environmental Research
& Technology (CE-CERT)
- 07/2018 – 06/2022 **University of California at Riverside**
Associate Adjunct Professor in Electrical and Computer Engineering (ECE)
Department and *Associate Researcher* in College of Engineering – Center for
Environmental Research & Technology (CE-CERT)
- 08/2014 – 05/2022 **Cal Poly Pomona**
Lecturer (Part-time) in Civil Engineering Department
- 07/2016 – 06/2018 **University of California at Riverside**
Assistant Adjunct Professor in ECE Department
- 07/2012 – 06/2018 **University of California at Riverside**
Assistant Researcher in CE-CERT
- 07/2010 – 06/2012 **University of California at Riverside**
Postdoctoral fellow in CE-CERT
- 08/2005 – 05/2010 **University of California at Berkeley (Mechanical Engineering)**
Graduate Student Researcher in California PATH Program
- 06/2005 – 05/2007 **University of California at Berkeley (Civil and Environmental Engineering)**
Graduate Student Researcher in NASA Ames Research Center, Moffett Field

RESEARCH INTEREST

- Emerging sustainable and intelligent transportation systems, including artificial connected and automated vehicles (CAVs), transportation electrification, mobility-as-a-service (MaaS), and active transportation.

- Cooperative automated driving especially in a mixed and multi-modal traffic environment.
- Analysis, modeling, simulation, and evaluation (AMSE) of advanced sustainable transportation systems and traffic related energy consumption and tailpipe/non-tailpipe emissions.
- Application of artificial intelligence (AI) and/or machine learning (ML) technique to improve perception, scene understanding, planning/decision making, and control/actuation of multi-scaled transportation systems.

RECENT HONORS AND AWARDS

- 2025 Gold Award in the CVPR 2025 TUMTraf V2X Grand Challenge
- 2025 Tier 2 Award in the USDOT's Intersection Safety Challenge (Stage 1B)
- 2023 The 2017-2020 IEEE Intelligent Transportation Systems Magazine Outstanding Survey Paper Award
- 2021 SAE International Arch T. Colwell Merit Award
- 2021 Certificate of Appreciation – TRB ACP30 (Vehicle-Highway Automation) Committee
- 2021 The 2nd Place at the International AUTOTRAC Competition
- 2020 Vincent Bendix Automotive Electronics Engineering Award

PUBLICATIONS

PATENTS

- P1.** Systems and Methods for a Cooperative Perception System, US Patent App. 19/185,085
- P2.** Systems and Methods for Cooperative Smart Lane Selection, US Patent 10,916,125
- P3.** Systems and Methods for Anticipatory Lane Change, US Patent App. 15/965,345
- P4.** System and Method for Lane Level Hazard Prediction, US Patent App. 15/981,222

Book Chapter(s)

- B1.** M. Barth, K. Boriboonsomsin, **G. Wu**, P. Hao. *Intelligent Transportation System Solutions in Disadvantaged Communities*. Springer, 2023
- B2.** X. Xia, S. Dreher, J. Ma, S. de Vires, **G. Wu**, C. Schwarz. *Automated Vehicle Testing & Data Collection Efforts*. Published by Springer Nature, 2023
- B3.** X. Liao, X. Zhao, M. Barth, **G. Wu**, Z. Wang and K. Han. *Driver Behavior-Aware Cooperative Ramp Merging for Intelligent Vehicles*. Published by De Gruyter 2023
- B4.** **G. Wu** and M. Barth. *Design of Systems with Automated and Electric Vehicles*. In *Shared Mobility and Automated Vehicles: Responding to Socio-technical Changes and Pandemics*, IET, 2022
- B5.** M. A. S. Kamal, M. Ramezani, **G. Wu**, C. Roncoli, J. Rios-Torres, and O. Orfila. *Partially Connected and Automated Traffic Operations in Road Transportation* (Editorial). Journal of Advanced Transportation, 2020
- B6.** P. Hao, **G. Wu**, Kanok. Boriboonsomsin, Matthew Barth. *Connected and Automated Vehicle Research and Development in the United States*. IET Transportation Series 25, 2019
- B7.** X. Qi, M. Barth, **G. Wu**, K. Boriboonsomsin, P. Wang. *Energy Impact of Connected Eco-driving on Electric Vehicles*. Springer, 2016
- B8.** M. Barth, **G. Wu**, K. Boriboonsomsin. *Intelligent Transportation Systems and Greenhouse Gas Reductions*. Current Sustainable/Renewable Energy Reports on Transportation, MV Chester (Section Ed.), DOI 10.1007/s40518-015-0032-y, Springer International Publishing, 2015.
- B9.** M. Barth, K. Boriboonsomsin and **G. Wu**. *Vehicle Automation and Its Potential Impacts on Energy and Emissions*. Springer, 2014



Refereed Journal Publications

Note: Author(s) underlined indicate student(s), postdoc(s), or visiting scholar(s) under my supervision.

*: Corresponding author

- J1. X. Shan, Q. Li, C. Wan, M. Ouyang, P. Hao, **G. Wu**, M. Barth. *An Enhanced Bilayer Long Short-term Memory Method for Energy Consumption Estimation of Electric Buses with Real-time Passenger Load*. Energy, 138726, 2025
- J2. C. Wei, **G. Wu**, MJ Barth. *Cooperative Perception for Automated Driving: A Survey of Algorithms, Applications, and Future Directions*. Proceedings of the IEEE, 2025
- J3. Z. Qin, S. Li, C. Wei, **G. Wu***, M. Barth, A. Abdelraouf. *Investigating Personalized Driving Behaviors in Dilemma Zones: Analysis and Prediction of Stop-or-Go Decisions*, IEEE Robotics and Automation Letters, 10 (10), 2025
- J4. Z. Zhang, C. Wei, **G. Wu***, M. Barth. *Vulnerable Road User Detection for Roadside-Assisted Safety Protection: A Comprehensive Survey*. Applied Science (2076-3417) 15(7), 2025
- J5. Y. Liao, H. Liu, R. Yao, **G. Wu***, M. Barth, Z. Huang, O. Osman, J. Hourdos, G. McHale. *Analysis, Modeling, and Simulation of Connected and Automated Trucks: State-of-the-Art and Identified Gaps*. Transportation Research Record, 03611981241306750, 2025
- J6. X. Zhao, Y Liao, **G. Wu***, A Venkatram, P Hao, K Boriboonsomsin. *Enhancing Freight-Related Emission Dispersion Estimation by Integrating Line-Source and Point-Source Models*. Transportation Research Record, 03611981251384959, 2025
- J7. D. Peng, **G. Wu**, K. Boriboonsomsin. *Bi-objective Battery Electric Truck Dispatching Problem with Backhauls and Time Windows*. Transportation Research Record, 2024
- J8. Z. Bai, **G. Wu***, M. Barth, Y. Liu, E. Sisbot, K. Oguchi, Z. Huang. *A Survey and Framework of Cooperative Perception: From Heterogeneous Singleton to Hierarchical Cooperation*. IEEE Transactions on ITS, 2024
- J9. X. Liao, Z. Zhao, M. Barth, A. Abdelraouf, R. Gupta, K. Han, J. Ma, **G. Wu***. *A Review of Personalization in Driving Behavior: Dataset, Modeling, and Validation*. IEEE Transactions on IV, 2024
- J10. W. Li, Z. Dong, L. Miao, **G. Wu**, Z. Deng, J. Zhao, W. Huang. *On-road Evaluation and Regulatory Recommendations for NOx and Particle Number Emissions of China VI Heavy-duty Diesel Trucks: A Case Study in Shenzhen*. Journal: Science of the Total Environment, 2024.
- J11. Z. Bai, **G. Wu***, M. Barth, H. Qiu, Y. Liu, E. Sisbot, K. Oguchi. *Pillar Attention Encoder for Adaptive Cooperative Perception*. IEEE Internet of Things Journal, 2024.
- J12. Z. Qin, A. Ji, Z. Sun, **G. Wu**, P. Hao, X. Liao. *Game Theoretic Application to Intersection Management: A Literature Review*, IEEE T-IV, 2024.
- J13. C. Wan, X. Shan, P. Hao, **G. Wu**. *Multi-objective Coordinated Control Strategy for Mixed Traffic with Partially Connected and Automated Vehicles in Urban Corridors*, Physica A, 635, 2024, 129485
- J14. X. Shan, C. Wan, P. Hao, **G. Wu**, M. Barth. *Developing A Novel Dynamic Bus Lane Control Strategy with Eco-driving under Partially Connected Vehicle Environment*, IEEE T-ITS, 2024.
- J15. D. Peng, **G. Wu**, K. Boriboonsomsin. *Energy-efficient Dispatching of Battery Electric Truck Fleets with Backhauls and Time Windows*. SAE International Journal of Electric Vehicles, 2024.
- J16. H. Dong, W. Zhuang, **G. Wu**, Z. Li, G. Yin, Z. Song. *Overtaking-enabled Eco-approach Control at Signalized Intersections for Connected and Automated Vehicles*, IEEE T-ITS, 2024.
- J17. A. Abdo, H. Chen, X. Zhao, **G. Wu**, Y. Feng. *Cybersecurity on Connected and Automated*

- Transportation Systems: A Survey*. IEEE T-IV, 2024.
- J18.** S. Fang, L. Yang, X. Zhao, W. Wang, Z. Xu, **G. Wu**, C. Wei, Y. Wu. *A Dynamic Transformation Car-following Model for the Prediction of the Traffic Flow Oscillation*. ITS Magazine, 2023
- J19.** Z. Bai, **G. Wu***, M. Barth, Y. Liu, E. A. Sisbot, K. Oguchi. *VINet: Lightweight, Scalable, and Heterogeneous Cooperative Perception for 3D Object Detection*. Mechanical Systems and Signal Processing, 2023
- J20.** W-L Shang, M. Zhang, **G. Wu**, L. Yang, S. Fang, W. Ochieng. *Estimation of Traffic Energy Consumption Based on Macro-micro Modelling with Sparse Data from Connected and Automated Vehicles*. Applied Energy, 2023
- J21.** L-W Chen, X. Wang, B. Lopez, **G. Wu**, S. S. H. Ho, J. C. Chow, J. G. Watson, Q. Yao, S. Yoon, H. Jung. *Contributions of Non-tailpipe Emissions to Near-road PM_{2.5} and PM₁₀: A Chemical Mass Balance Study*. Environmental Pollution, 2023
- J22.** L. Yang, J. Zhan, W-L Shang, S. Fang, **G. Wu**, X. Zhao, M. Deveci. *Multi-lane Coordinated Control Strategy of Connected and Automated Vehicles for On-Ramp Merging Area Based on Cooperative Game*, IEEE Transactions on Intelligent Transport Systems, 2023
- J23.** Z. Bai, S. Nayak, X. Zhao, **G. Wu***, M. Barth, X. Qi, Y. Liu, E. Sisbot, K. Oguchi. *Cyber Mobility Mirror: A Deep Learning-based Real-World Object Perception Platform Using Roadside LiDAR*, IEEE Transactions on Intelligent Transport Systems, 2023
- J24.** X. Liao, X. Zhao, Z. Wang, Z. Zhao, K. Han, R. Gupta, M. Barth, **G. Wu***. *Driver Digital Twin for Online Prediction of Personalized Lane Change Behavior*, IEEE Internet of Things Journal, 2023
- J25.** X. Liao, **G. Wu***, L. Yang, M. Barth. *A Real-World Data-Driven Approach for Estimating Environmental Impacts of Traffic Accidents*, Transportation Research Part D, 2023
- J26.** D. Peng, Z. Zhao, **G. Wu**, K. Boriboonsomsin. *Bi-Level Fleet Dispatching Strategy for Battery-Electric Trucks: A Real-World Case Study*, Sustainability, 2023
- J27.** Y. Ding, X. Zhao, J. Luo, **G. Wu***, A. Venkatram. *Field Study to Estimate Exposure to Vehicle Exhaust During Idling and Starting*, Atmospheric Pollution Research, 2023
- J28.** X. Wang, S. Gronstal, B. Lopez, H. Jung, L.-W. Chen, **G. Wu**, S. Sai Hang Ho, J. C. Chow, J. G. Watson, Q. Yao, and S. Yoon. *Evidence of Non-Tailpipe Emission Contributions to PM_{2.5} and PM₁₀ near Southern California Highways*, Environmental Pollution, 2023.
- J29.** F. Un-Noor, G. Scora, **G. Wu**, S. Yoon, K. Boriboonsomsin. *Cost-Effectiveness of Off-Road Equipment Electrification Incentives: Cost Estimation, Evaluation, and Usage Framework*. Transportation Research Record, 2023
- J30.** X. Shan, C. Wan, P. Hao, **G. Wu**, X. Zhang. *Connected Eco-Driving for Electric Buses along Signalized Arterials with Bus Stops*, IET Intelligent Transport Systems, 2022
- J31.** X. Zhao, X. Liao, Z. Wang, **G. Wu***, et al., *Co-Simulation Platform for Modeling and Evaluating Connected and Automated Vehicles and Human Behavior in Mixed Traffic*, SAE Intl. J CAV 5(4):2022, <https://doi.org/10.4271/12-05-04-0025>.
- J32.** Z. Bai, **G. Wu***, X. Qi, Y. Liu, K. Oguchi, M. Barth. *Cyber Mobility Mirror for Enabling Cooperative Driving Automation in Mixed Traffic: A Co-Simulation Platform*. IEEE ITS Magazine, 2022
- J33.** B. Ciuffo, et al. *Robotic Competitions to Design Future Transport Systems: The Case of JRC AUTOTRAC 2020*. Transportation Research Record, 2022, <https://doi.org/10.1177/03611981221110566>
- J34.** F. Un-Noor, **G. Wu**, H. Perugu, S. Collier, S. Yoon, M. Barth, K. Boriboonsomsin. *Off-Road*



- Construction and Agricultural Equipment Electrification: Review, Challenges, and Opportunities*. Vehicles. Vehicles, 4(3), 2022, 780 – 807
- J35.** N. Williams, P. Darian, **G. Wu***, P. Closas, M. Barth. *Impact of Positioning Uncertainty on Connected and Automated Vehicle Applications*. SAE International Journal of Connected and Automated Vehicles, 2022
- J36.** N. Williams, A. Vu, **G. Wu***, M. Barth, K. Zhou. *Using RTCM Corrections in a Consumer-Grade Lane-Level Positioning System for Connected Vehicles*. SAE International Journal of Connected and Automated Vehicles, 2022
- J37.** L. Yang, M. Han, S. Fang, **G. Wu**, H. Sheng, H. Wei, X. Zhao. *Differentiated Trajectory Planning for Connected and Automated Electric Vehicles at Signalized Intersections Considering Wireless Power Transfer*. Journal of Advanced Transportation. 2022
- J38.** L. Yang, Y. Yang, **G. Wu***, X. Zhao, S. Fang, X. Liao, R. Wang, M. Zhang. *A Systematic Review of Autonomous Emergency Braking Technology: Impact Factor, Technology and Performance Evaluation*. Journal of Advanced Transportation. ID 1188089, 2022
- J39.** L. Yang, S. Fang, **G. Wu**, H. Sheng, Z. Xu, M. Zhang, X. Zhao. *Physical model versus Artificial Neural Network (ANN) model: A comparative study on modeling car-following behavior at signalized intersections*. Journal of Advanced Transportation. ID 8482846, 2022
- J40.** X. Zhao, A. Abdo, X. Liao, M. Barth, **G. Wu***. *Evaluating Cybersecurity Risks of Cooperative Ramp Merging in Mixed Traffic Environments*. IEEE ITS Magazine, 2022
- J41.** Z. Gao, T. LaClair, K. Nawaz, **G. Wu**, P. Hao, K. Boriboonsomsin, M. Todd, M. Barth, A. Goodarzi. *Comprehensive Powertrain Modeling for Heavy-duty Applications: A Study of Plug-in Hybrid Electric Buses*. Energy Conversion and Management, Volume 252, January 2022, 115071
- J42.** X. Liao, X. Zhao, Z. Wang, K. Han, P. Tiwari, M. Barth, **G. Wu***. *Game Theory-Based Ramp Merging for Mixed Traffic with Unity-SUMO Co-Simulation*. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2021
- J43.** N. Williams, M. Barth, and **G. Wu**. *Position Uncertainty-Tolerant Cooperative Merging Application for Mixed Multilane Traffic*. IEEE Transactions on Intelligent Vehicles, 2022
- J44.** D. Esaid, P. Hao, **G. Wu**, F. Ye, Z. Wei, K. Boriboonsomsin, M. Barth. *Machine Learning-based Eco-Approach and Departure: Real-Time Trajectory Optimization at Connected Signalized Intersections*. SAE International Journal of Sustainable Transportation, Energy, Environment, & Policy, 2021
- J45.** X. Liao, Z. Wang, X. Zhao, K. Han, P. Tiwari, M. Barth, **G. Wu***. *Cooperative Ramp Merging Design and Field Implementation: A Digital Twin Approach based on Vehicle-to-Cloud Communication*. IEEE Transactions on Intelligent Transportation Systems, 2021
- J46.** Z. Zhao, **G. Wu***, and M. Barth. *Corridor-Wise Eco-Friendly Cooperative Ramp Management System for Connected and Automated Vehicles*. Sustainability. 2021, 13 (15), 8557
- J47.** H. Min, Y. Fang, X. Wu, **G. Wu**, X. Zhao. *On-Ramp Merging Strategy for Connected and Automated Vehicles Based on Complete Information Static Game*. Journal of Traffic and Transportation Engineering, 8(4), 2021, pp. 582 – 595
- J48.** W. Li, **G. Wu***, D. Yao, Y. Zhang, M. Barth, K. Boriboonsomsin. *Stated Acceptance and Behavioral Responses of Drivers towards Innovative Connected Vehicle Applications*. Accident Analysis and Prevention, 2021, 155, 106095
- J49.** L. Zhu, Z. Zhao, **G. Wu**. *Shared Automated Mobility with Demand-side Cooperation: A Proof-of-Concept Microsimulation Study*. Sustainability. 2021, 13(5), 2483
- J50.** Y. Chen, **G. Wu**, R. Sun, A. Dubey, A. Laszka, P. Pugliese. *A Review and Outlook of Energy*

- Consumption Estimation Models for Electric Vehicles*. SAE International Journal of Sustainable Transportation, Energy, Environment, & Policy, 2(1), 2021, pp. 79 – 96
- J51.** J. Hu, Z. Zhang, L. Xiong, H. Wang, **G. Wu**. *Cut Through Traffic to Catch Green Light: Eco Approach with Overtaking Capability*. Transportation Research Part C. Vol. 123, February 2021, 102927
- J52.** F. Un-Noor, G. Scora, **G. Wu**, K. Boriboonsomsin. *Operational Feasibility Assessment of Battery Electric Construction Equipment Based on In-Use Activity Data*. Transportation Research Record, 2021, 03611981211004581
- J53.** P. Hao, K. Boriboonsomsin, C. Wang, **G. Wu**, M. Barth. *Connected Eco-Approach and Departure (EAD) System for Diesel Trucks*, SAE International Journal of Sustainable Transportation, Energy, Environment, & Policy, 14(2), 2021, pp. 217-227.
- J54.** **G. Wu***, P. Hao, Z. Wang, Y. Jiang, K. Boriboonsomsin, M. Barth, M. McConnell, S. Qiang, J. Stark. *Eco-Approach and Departure along Signalized Corridors*. SAE International Journal of Sustainable Transportation, Energy, Environment, & Policy, 2021, 2(1)
- J55.** L. Yang, X. Zhao, **G. Wu***, Z. Xu, M. Barth, F. Hui, P. Hao, M. Han, Z. Zhou, S. Fang, S. Jing. *Review of Cooperative Eco-driving Strategies based on Connected and Automated Vehicles*. Journal of Traffic and Transportation Engineering, 2020 (in Chinese).
- J56.** Z. Wang, X. Liao, C. Wang, D. Oswald, **G. Wu***, K. Boriboonsomsin, M. Barth, K. Han, B. Kim, and P. Tiwari. *Driver Behavior Modeling using Game Engine and Real Vehicle: A Learning-Based Approach*. IEEE Transactions on Intelligent Vehicles, 5(4), 2020, pp. 738 – 749
- J57.** Z. Wang, Y. Bian, S. Shladover, **G. Wu***, S. Li, and M. Barth. *A Survey on Cooperative Longitudinal Motion Control of Multiple Connected Automated Vehicles*. IEEE Intelligent Transportation Systems Magazine. 12(1), 2020, pp. 4 – 24
- J58.** C. Wang, P. Hao, **G. Wu**, X. Qi, and M. Barth. *Intersection and Stop Bar Position Extraction from Vehicle Positioning Data*. IEEE Transactions on Intelligent Transportation Systems. 2020, DOI: 10.1109/TITS.2020.3039357
- J59.** D. Tian, **G. Wu***, C. Wang, K. Boriboonsomsin, M. Barth. *An Innovative Framework to Evaluate the Performance of Connected Vehicle Applications: from the Perspective of Speed Variation-Based Entropy (SVE)*. IEEE Intelligent Transportation Systems Magazine, 2020, DOI: 10.1109/MITS.2019.2907678
- J60.** Z. Wang, **G. Wu***, M. Barth. *Cooperative Eco-Driving at Signalized Intersections in a Partially Connected and Automated Vehicle Environment*. IEEE Transactions on Intelligent Transportation Systems. 21(5), 2020, pp. 2029 - 2038
- J61.** Z. Wang, **G. Wu***, K. Boriboonsomsin, M. Barth, K. Han, B. Kim, P. Tiwari. *Cooperative Ramp Merging System: Agent-Based Modeling and Simulation using Game Engine*. SAE International Journal of Connected and Automated Vehicles, 2(2), 2019, pp. 115 – 128
- J62.** Z. Gao, T. LaClair, S. Ou, S. Huff, **G. Wu**, P. Hao, K. Boriboonsomsin, M. Barth. *Evaluation of Electric Vehicle Component Performance Over Eco-Driving Cycles*. Energy, Vol. 172, 2019, pp. 823 – 839
- J63.** J. Luo, **G. Wu***, Z. Wei. K. Boriboonsomsin, M. Barth. *Developing an Aerial-Image-based Approach for Creating Digital Sidewalk Inventories*. Transportation Research Record, 2673 (8), 2019, pp. 499 – 507
- J64.** D. Tian, **G. Wu***, P. Hao, K. Boriboonsomsin, M. Barth. *Connected Vehicle-Based Lane Selection Assistance Application*. IEEE Transactions on Intelligent Transportation Systems, 20(7), 2019, pp. 2630 – 2643



- J65.** X. Qi, Y. Luo, **G. Wu**, K. Boriboonsomsin, M. Barth. *Deep Reinforcement Learning Enabled Self-Learning Control for Energy Efficient Driving*. Transportation Research Part C: Emerging Technologies, Vol. 99, 2019, pp. 67 – 81
- J66.** X. Shan, P. Hao, K. Boriboonsomsin, **G. Wu**, M. Barth, X. Chen. *Partially Limited Access Control Design for Special-use Freeway Lanes*. Transportation Research Part A: Policy and Practice, Vol. 118, 2018, pp. 25 – 37
- J67.** F. Ye, P. Hao, X. Qi, **G. Wu**, K. Boriboonsomsin, M. Barth. *Prediction-based Eco-Approach and Departure at Signalized Intersections with Speed Forecasting on Preceding Vehicles*. IEEE Transactions on Intelligent Transportation Systems, 20(4), 2018, pp. 1378 – 1389
- J68.** X. Qi, P. Wang, **G. Wu**, K. Boriboonsomsin, M. Barth. *Connected Cooperative Ecodriving System Considering Human Driver Error*. IEEE Transactions on Intelligent Transportation Systems, 19 (8), 2018, pp. 2721 – 2733
- J69.** Z. Wang, **G. Wu***, P. Hao, M. Barth. *Cluster-Wise Cooperative Eco-Approach and Departure Application for Connected and Automated Vehicles along Signalized Arterials*. IEEE Transactions on Intelligent Vehicles, Vol. 3, No. 4, 2018, pp. 404 – 413
- J70.** X. Shan, P. Hao, X. Chen, K. Boriboonsomsin, **G. Wu**, M. Barth. *Vehicle Energy/Emissions Estimation Based on Vehicle Trajectory Reconstruction Using Sparse Mobile Sensor Data*. IEEE Transactions on Intelligent Transportation Systems, 20 (2), 2018, pp. 716 – 726
- J71.** P. Hao, **G. Wu**, K. Boriboonsomsin, M. Barth. *Eco-Approach and Departure (EAD) Application for Actuated Signals in Real-World Traffic*. IEEE Transactions on Intelligent Transportation Systems, 20(1), 2018, pp. 30 – 40
- J72.** X. Qi, **G. Wu***, K. Boriboonsomsin, M. Barth. *Data-Driven Decomposition Analysis and Estimation of Link-Level Electric Vehicle Energy Consumption under Real-World Traffic Conditions*. Transportation Research Part D, Vol. 64, 2018, pp. 36 – 52
- J73.** D. Tian, **G. Wu***, K. Boriboonsomsin, M. Barth. *Performance Measurement Evaluation Framework and Co-Benefit/Tradeoff Analysis for Connected and Automated Vehicles (CAV) Applications: A Survey*. IEEE Intelligent Transportation Systems Magazine, Vol.10, No. 3, 2018, pp. 110 – 122
- J74.** O. Altan, **G. Wu***, M. Barth, K. Boriboonsomsin, J. Stark. *GlidePath: Eco-Friendly Automated Approach and Departure at Signalized Intersections*. IEEE Transactions on Intelligent Vehicles, 2(4), 2017, pp. 266 – 277
- J75.** Z. Wang, **G. Wu***, M. Barth. *Developing a Distributed Consensus-Based Cooperative Adaptive Cruise Control (CACC) System for Heterogeneous Vehicles with Predecessor Following Topology*. Journal of Advanced Transportation, 2017
- J76.** Q. Yang, **G. Wu***, K. Boriboonsomsin and M. Barth. *A Novel Arterial Travel Time Distribution Estimation Model and Its Application to Energy/Emissions Estimation*. Journal of Intelligent Transportation Systems, 22(4), 2017
- J77.** W. Li, **G. Wu***, Y. Zhang, and M. Barth. *Safety Analysis of Eco-Approach and Departure Application at a Signalized Corridor*. Tsinghua Science and Technology, Vol. 23, No. 2, 2018, pp. 157 – 171
- J78.** W. Li, **G. Wu***, K. Boriboonsomsin, M. Barth, S. Rajab, S. Bai, and Y. Zhang. *Development and Evaluation of High-Speed Differential Warning Application using Vehicle-to-Vehicle Communication*. Transportation Research Record, No. 2621, 2017, pp. 81 – 91
- J79.** X. Qi, **G. Wu***, P. Hao, K. Boriboonsomsin, and M. Barth. *Integrated Connected Eco-Driving System for PHEVs with Co-optimization of Vehicle Dynamics and Powertrain Operations*. IEEE

Transactions on Intelligent Vehicles, 2(1), 2017, pp. 2 – 13

- J80.** W. Li, **G. Wu***, Y. Zhang, and M. Barth. *A Comparative Study on Data Segregation for Mesoscopic Energy Modeling*. Transportation Research Part D, Vol. 50, 2017, pp. 70 – 82
- J81.** X. Qi, **G. Wu***, K. Boriboonsomsin, and M. Barth. *Development and Evaluation of an Evolutionary Algorithm-Based Online Energy Management System for Plug-in Hybrid Electric Vehicles*. IEEE Transactions on Intelligent Transportation Systems, 18(8), 2017, pp. 2181 – 2191
- J82.** P. Hao, K. Boriboonsomsin, **G. Wu**, and M. Barth. *Modal Activity-Based Stochastic Model for Estimating Vehicle Trajectories from Sparse Mobile Sensor Data*. IEEE Transactions on Intelligent Transportation Systems, 18(3), 2017, pp. **701 – 711**
- J83.** K. Boriboonsomsin, **G. Wu**, and M. Barth. *Going the Extra Mile: Intelligent Energy Management of Plug-In Hybrid Electric Vehicles*. ACCESS, No. 48, Spring 2016
- J84.** Q. Jin, **G. Wu***, K. Boriboonsomsin, and M. Barth. *Power-Based Optimal Longitudinal Control for a Connected Eco-Driving System*. IEEE Transactions on Intelligent Transportation Systems, Vol. 17, No. 10, 2016, pp. 2900 – 2910
- J85.** X. Qi, **G. Wu***, K. Boriboonsomsin, M. Barth, and J. Gonder. *Data-Driven Reinforcement Learning-Based Real-Time Energy Management System for Plug-in Hybrid Electric Vehicles with Charging Opportunities*. Transportation Research Record, No. 2572, 2016, DOI: <http://dx.doi.org/10.3141/2572-01>
- J86.** X. Qi, **G. Wu***, K. Boriboonsomsin and M. Barth. *Empirical Study of Lane-changing Characteristics on High-Occupancy-Vehicle Facilities with Different Types of Access Control based on Aerial Survey Data*. ASCE Journal of Transportation Engineering, 142(1), 2015
- J87.** **G. Wu***, K. Boriboonsomsin, M. Barth and R. R. Tadi. *Comparative Analysis of Empirical Capacities between Freeways with Different Types of High-Occupancy Vehicle (HOV) Access Control*. Transportation Research Record, No. 2484, 2015, pp. 149 – 158
- J88.** K. Boriboonsomsin, **G. Wu**, P. Hao and M. Barth. *Fusion of Vehicle Weight and Activity Data for Improved Vehicle Emission Modeling*. Transportation Research Record, No. 2503, 2015, pp. 153 – 162
- J89.** **G. Wu***, K. Boriboonsomsin and M. Barth. *Supplementary Benefits from Partial Vehicle Automation in an Eco-Approach/Departure Application at Signalized Intersections*. Transportation Research Record, No. 2424, 2014, pp. 66 – 75
- J90.** **G. Wu***, K. Boriboonsomsin and M. Barth. *Development and Evaluation of an Intelligent Energy Management Strategy for Plug-in Hybrid Electric Vehicles*. IEEE Transaction on Intelligent Transportation Systems, Vol. 15, No. 3, 2014, pp. 1091 – 1100
- J91.** Y. Du, **G. Wu***, K. Boriboonsomsin and C-Y Chan. *Empirical Study on Lane Changing Behaviors Along Different Types of High-Occupancy Vehicle Lanes in California*. Transportation Research Record, No. 2396, 2013, pp. 143 – 150
- J92.** L. Zhang and **G. Wu**. *Dynamic Lane Grouping at Isolated Intersections: Problem Formulation and Performance Analysis*. Transportation Research Record: Journal of the Transportation Research Board. No. 2311, 2012, pp. 152 – 166
- J93.** **G. Wu**, L. Zhang, W-B Zhang and M. Tomizuka. *Signal Optimization at Urban Highway Rail Grade Crossing (HRGC) Using On-line Adaptive Priority Strategy*. ASCE's Journal of Transportation Engineering, 138 (4), 2012, pp. 479 – 484
- J94.** J-Q, Li, **G. Wu**, and N. Zhou. *The Model and Algorithm for Investigating the Impacts of Signal Timing on Vehicle Emissions at an Isolated Intersection*. Transportation Research Part D, 16(5), 2011, pp. 409 – 414



- J95.** G. Wu, Y. Du, K. Jang, C-Y Chan, and K. Boriboonsomsin. *Preliminary Evaluation of Operational Performance between Different Types of HOV Facilities in California: Continuous-Access vs. Limited-Access*. Transportation Research Record: Journal of the Transportation Research Board. No. 2229, 2011, pp. 93 – 101
- J96.** G. Wu, K. Boriboonsomsin, W-B Zhang, M. Li and M. J. Barth. *Energy and Emission Benefit Comparison between Stationary and In-vehicle Advanced Driving Alert Systems*. Transportation Research Record: Journal of the Transportation Research Board. No. 2189, 2010, pp. 98 – 106
- J97.** M. Li, K. Boriboonsomsin, G. Wu, W-B Zhang, and M. J. Barth. *Traffic Energy and Emission Reductions at Signalized Intersections: A Study of the Benefits of Advanced Driver Information*. International Journal of ITS Research, Vol. 7, No. 1, June, 2009
- J98.** M. Li, G. Wu, Y. Li, F. Bu, and W-B Zhang. *Active Signal Priority for Light Rail Transit at Grade Crossings*. Transportation Research Record: Journal of the Transportation Research Board. 2035: 141-149, 2007
- J99.** G. Wu, D. Li, Y. Xue, and D. Tang. *Tuning of Decentralized PID Controllers for Coordinated Boiler-Turbine Control*. Journal of Tsinghua University (Science and Technology), Vol. 44: 2, 2004 (In Chinese)
- J100.** G. Wu, D. Li, and Y. Xue. *Study on Tuning for Decentralized PID Controllers of Distillation Column*. Control and Instruments in Chemical Industry. Vol. 31: 3, 2004 (In Chinese)
- J101.** G. Wu, D. Li, Y. Xue, and D. Tang. *Design of Decentralized PID Controllers for Multivariable Systems*. Journal of Tsinghua University (Science and Technology). Vol. 44: 11, 2004 (In Chinese)
- J102.** F. Xu, D. Li, X. Jiang, Z. Li, and G. Wu. *Monte-Carlo Simulation of PID Tuning Method*. Journal of Tsinghua University (Science and Technology). Vol.42: 12, 2002 (In Chinese)

Peer-Reviewed Conference Publications

- C1.** C. Wei, Z. Qin, W. Zimmer, G. Wu*, M. Barth. *HeCoFuse: Cross-Modal Complementary V2X Cooperative Perception with Heterogeneous Sensors*. IEEE ITSC, 2025
- C2.** S. Tasneem, M. Stas, G. Wu*, M. Barth. *ARRT*: A Hybrid Heuristic RRT* Approach for Efficient Path Planning*. IEEE ITSC, 2025
- C3.** S. Nayak, G. Wu, K. Boriboonsomsin, M. Barth. *Dual LiDAR-Based Traffic Movement Count Estimation at a Signalized Intersection: Deployment, Data Collection, and Preliminary Analysis*. IEEE ITSC, 2025
- C4.** C. Wei, Z. Qin, Z. Zhang, G. Wu*, M. Barth. *Integrating Multi-Modal Sensors: A Review of Fusion Techniques for Intelligent Vehicles*. IEEE IV Symposium, 2025
- C5.** Z. Zhang, G. Wu*, P. Hao, K. Boriboonsomsin, M. Barth, Y. Liu, Y. Farid. *Evaluating the Impacts of Connected Eco-Driving Technologies on Electrified Traffic System at the City Scale: A Simulation Approach*. IEEE IV Symposium, 2025
- C6.** Z. Zhao, G. Wu, P. Hao, F. Ye, Z. Gao, T. J. LaClair, D. Brown, D. Esaid, K. Boriboonsomsin, M. Barth. *Design, Implementation, and Evaluation of an Innovative Vehicle-Powertrain Eco-Operation System for Plug-in Hybrid Electric Buses*. IEEE Sustech, 2025, 1 – 8
- C7.** C. Wei, G. Wu*, M. Barth. *EKI-GAN: Context-Aware Vehicle Trajectory Forecasting with Vehicle Factors and Environmental Information at Signalized Intersections*. 9th AI City Challenge Workshop, IEEE/CVF ICCV, 2025
- C8.** Z. Qin, X. Yao, C. Wei, A. Ji, G. Wu, Z. Sun. *Contextual-Personalized Adaptive Cruise Control via Fine-Tuned Large Language Models*, IEEE/CVF ICCV, 2025
- C9.** C. Wei, Z. Zhang, H. Liu, G. Wu*, M. Barth. *Hierarchical Multi-Modal Fusion for Roadside VRU*

- Detection: Method Complementarity Under Sparse Label Constraints*. IEEE/CVF ICCV, 2025
- C10.** H. Liu, P. Hao, S. Matsumoto, **G. Wu**, M. Barth. *A Cost-Effective Vehicle-Probe-Based Signal Management Technology with Microscopic Simulation Evaluation*. International Conference on Transportation and Development, 2025, 456-469
- C11.** C. Wei, **G. Wu**, M. Barth. *RAF-RCNN: Adaptive Feature Transfer from Clear to Rainy Conditions for Improved Object Detection*. IEEE ITSC 2024
- C12.** C. Wei, **G. Wu***, M. Barth, A. Abdelraouf, R. Gupta, K. Han. *KI-GAN: Knowledge-Informed Generative Adversarial Networks for Enhanced Trajectory Forecasting at Signalized Intersections*. CVPR AICITY Workshop, 2024 (accepted)
- C13.** C. Wei, **G. Wu***, M. Barth. *Feature Corrective Transfer Learning: End-to-End Solutions to Object Detection in Non-Ideal Visual Conditions*. CVPR UG2+ Workshop, 2024 (accepted)
- C14.** A. Abdo, **G. Wu**, N. Abu-Ghazaleh. *VEhicular Secure Network Open Simulator (VESNOS): A Cyber-security Oriented Co-simulation Platform for Connected and Automated Driving*. The 38th ACM SIGSIM Conference on Principles of Advanced Discrete Simulation, 2024 (accepted)
- C15.** D. Oswald, J. Escobar, **G. Wu**, H. Jung, M. Barth. *Electric Vehicle Modeling: Advanced Torque Split Analysis across Different Architectures*. SAE WCX 2024
- C16.** X. Zhao, **G. Wu***, A. Venkatram, J. Luo, P. Hao, K. Boriboonsomsin, S. Hu. *Integrated Simulation Platform for Quantifying the Traffic-Induced Environmental and Health Impacts*. IEEE FISTS 2024
- C17.** C. Wei, Z. Qin, **G. Wu***, M. Barth, A. Abdelraouf, R. Gupta, K. Han. *Exploring the Dilemma Zone Problem: A Comprehensive Study of Influential Factors and Mitigation Strategies*. IEEE FISTS 2024
- C18.** Q. Liang, R. Yao, R. Zhang, Z. Chen, **G. Wu**. *Agent-based Simulation Evaluation of CBD Tolling: A Case Study from New York City*. IEEE FISTS 2024
- C19.** S. Li, C. Wei, **G. Wu***, M. Barth, R. Gupta, A. Abdelraouf, K. Han. *Personalized Trajectory Prediction for Driving Behavior Modeling in Ramp-Merging Scenarios*. IEEE IRC 2023
- C20.** Z. Qin, L. Yang, A. Ji, P. Hao, **G. Wu**, Z. Sun. *A Game-theoretical Integrated Longitudinal and Lateral Controller for Autonomous Vehicles*. The 103rd TRB Annual Meeting, Washington D.C., 2024, January
- C21.** Z. Bai, **G. Wu***, M. Barth, Y. Liu, E. A. Sisbot, K. Oguchi. *Pillar Attention Encoder for Adaptive Cooperative Perception*. The 103rd TRB Annual Meeting, Washington D.C., 2024, January
- C22.** Y. Liao, H. Liu, R. Yao, **G. Wu***, M. Barth, Z. Huang, O. Osman, J. Hourdos, G. McHale. *Analysis, Modeling and Simulation of Connected and Automated Trucks: State-of-the-Art and Identified Gaps*. The 103rd TRB Annual Meeting, Washington D.C., 2024, January
- C23.** D. Peng, **G. Wu**, K. Boriboonsomsin. *The Bi-objective Battery Electric Truck Dispatching Problem with Backhauls and Time Windows*. The 103rd TRB Annual Meeting, Washington D.C., 2024, January
- C24.** X. Zhao, X. Liao, **G. Wu***, K. Boriboonsomsin, M. Barth. *Improving Truck Merging at Ramps in a Mixed Traffic Environment: A Multi-human-in-the-loop (MHuiL) Approach*. The 103rd TRB Annual Meeting, Washington D.C., 2024, January
- C25.** X. Zhao, **G. Wu***, A. Venkatram, J. Luo, P. Hao, K. Boriboonsomsin, S. Hu. *Integrated Simulation Platform for Quantifying the Traffic-Induced Environmental and Health Impacts*. The 103rd TRB Annual Meeting, Washington D.C., 2024, January
- C26.** C. Wei, **G. Wu***, M. Barth, P-H Chan, V. Donzella, A. Huggett, *Enhanced Object Detection by Integrating Camera Parameters into Raw Image-Based Faster R-CNN*, IEEE 26th International



Conference on Intelligent Transportation Systems (ITSC), September 24-28, 2023, Bizkaia, Spain.
(e-file)

- C27. Z. Bai, **G. Wu***, M. Barth, Y. Liu, E. A. Sisbot, K. Oguchi, *Dynamic Feature Sharing for Cooperative Perception from Point Clouds*, IEEE 26th International Conference on Intelligent Transportation Systems (ITSC), September 24-28, 2023, Bizkaia, Spain.
- C28. X. Zhao, X. Liao, **G. Wu***, K. Boriboonsomsin, M. Barth, *Improving Truck Merging at Ramps in a Mixed Traffic Environment: A Multi-human-in-the-loop (MHuiL) Approach*, IEEE 26th International Conference on Intelligent Transportation Systems (ITSC), September 24-28, 2023, Bizkaia, Spain.
- C29. Z. Zhao, X. Liao, A. Abdelraouf, K. Han, R. Gupta, M. Barth, **G. Wu***. *Inverse Reinforcement Learning and Gaussian Process Regression-based Real-time Framework for Personalized Adaptive Cruise Control*, IEEE 26th International Conference on Intelligent Transportation Systems (ITSC), September 24-28, 2023, Bizkaia, Spain.
- C30. Z. Zhao, X. Liao, A. Abdelraouf, K. Han, R. Gupta, **G. Wu***, M. Barth. *Real-time Learning of Driving Gap Preference for Personalized Adaptive Cruise Control*, 2023 IEEE SMC
- C31. X. Liao, **G. Wu***, M. Barth, R. Gupta, K. Han. *Exploring Vehicular Interaction from Trajectories Based on Granger Causality*, 2023 IEEE Intelligent Vehicles Symposium, Alaska, June 2023
- C32. Z. Bai, J. G. Escobar, **G. Wu***, M. Barth. *Object Perception Framework for Connected and Automated Vehicles: A Case Study*, 2023 IEEE Transportation Electrification Conference & Expo
- C33. S. Nayak, Z. Bai, **G. Wu**, M. Barth, Y. Liu, E. Sisbot, K. Oguchi. *Evaluation of Infrastructure-Assisted Cooperative Tracking of Vehicles Using Various Motion Models*, IEEE/ION PLANS 2023 Conference, Monterey Bay, April 2023
- C34. Z. Bai, **G. Wu***, M. Barth, Y. Liu, E. Sisbot, K. Oguchi. *VINET: Scalable, Lightweight, and Heterogeneous Cooperative 3D Object Detection from Point Clouds*. The 102nd TRB Annual Meeting, Washington D.C., 2023, January
- C35. W. Hu, D. Oswald, **G. Wu**, J. Farrell. *Assessment of U.S. Department of Transportation Lane-Level Map for Connected Vehicle Applications*. The 102nd TRB Annual Meeting, Washington D.C., 2023, January
- C36. S. Nayak, Z. Bai, **G. Wu***, M. Barth, Y. Liu, E. Sisbot, K. Oguchi. *Evaluating Positioning Accuracy of a Roadside LiDAR-Based Vehicle Localization System*. The 102nd TRB Annual Meeting, Washington D.C., 2023, January
- C37. D. Oswald, P. Hao, **G. Wu**, M. Barth. *Eco-friendly Cooperative Traffic Optimization (EcoTOP) at Signalized Intersections with Mixed Connected Traffic*. The 102nd TRB Annual Meeting, Washington D.C., 2023, January
- C38. X. Liao, X. Zhao, Z. Wang, Z. Zhao, K. Han, M. Barth, **G. Wu***. *Driver Digital Twin for Online Prediction of Personalized Lane Change Behavior and Field Implementation*. The 102nd TRB Annual Meeting, Washington D.C., 2023, January
- C39. Z. Zhao, J. Cao, **G. Wu***, M. Barth, Y. Liu, E. Sisbot, K. Oguchi. *Development and Implementation of Fisheye Camera-based Infrastructure-Supported Real-time Cooperative Perception System at Intersection*. The 102nd TRB Annual Meeting, Washington D.C., 2023, January
- C40. A. Abdo, H. Chen, X. Zhao, Y. Feng, **G. Wu***. *Cyber Security on Connected and Automated Vehicles: A Survey*. The 102nd TRB Annual Meeting, Washington D.C., 2023, January
- C41. D. Peng, Z. Zhou, **G. Wu***, K. Boriboonsomsin. *Bi-Level Fleet Dispatching Strategy for Battery-Electric Trucks: A Real-World Case Study*. The 102nd TRB Annual Meeting, Washington D.C., 2023, January

- C42. F. Un-Noor, G. Scora, **G. Wu**, S. Yoon, K. Boriboonsomsin. *Cost-Effectiveness of Off-Road Equipment Electrification Incentives: Cost Estimation, Evaluation, and Usage Framework*. The 102nd TRB Annual Meeting, Washington D.C., 2023, January
- C43. J. Cao, Z. Zhao, **G. Wu***, M. Barth, Y. Liu, E. Sisbot, K. Oguchi. *Real-time Adaptive Background Subtraction for Traffic Scenarios at Signalized Intersections Based on Roadside Fish-eye Cameras*. 2022 IEEE ITSC, Macau, China, October 2022
- C44. Z. Bai, **G. Wu***, M. Barth, Y. Liu, E. Sisbot, K. Oguchi. *PillarGrid: Deep Learning-based Cooperative Perception for 3D Object Detection from Onboard-Roadside LiDAR*, 2022 IEEE 25th International Conference on Intelligent Transportation Systems (ITSC), Macau, China, October 2022
- C45. Z. Wei, X. Qi, Z. Bai, **G. Wu***, S. Nayak, P. Hao, M. Barth, Y. Liu, K. Oguchi. *Spatiotemporal Transformer Attention Network for 3D Voxel Level Joint Segmentation and Motion Prediction in Point Cloud*. 2022 IEEE Intelligent Vehicle Symposium, Aachen, Germany, June 2022
- C46. Z. Bai, **G. Wu***, X. Qi, Y. Liu, K. Oguchi, M. Barth. *Infrastructure-Based Object Detection and Tracking for Cooperative Driving Automation: A Survey*. 2022 IEEE Intelligent Vehicle Symposium, Aachen, Germany, June 2022
- C47. A. Abdo, **G. Wu**, N. Abu-Ghazaleh, Q. Zhu. *CVGuard: Mitigating Application Attacks on Connected Vehicles*. 2022 IEEE Intelligent Vehicle Symposium, Aachen, Germany, June 2022
- C48. X. Liao, Z. Wang, X. Zhao, Z. Zhao, K. Han, R. Gupta, P. Tiwari, M. J. Barth and **G. Wu***. *Online Prediction of Lane Change with a Hierarchical Learning-Based Approach*. IEEE ICRA 2022, Philadelphia, PA, May 2022
- C49. Z. Zhao, Z. Wang, K. Han, R. Gupta, P. Tiwari, **G. Wu*** and M. J. Barth. *Personalized Car Following for Autonomous Driving with Inverse Reinforcement Learning*. IEEE ICRA 2022, Philadelphia, PA, May 2022
- C50. S. Liu, **G. Wu***, M. Barth. *A Complete State Transition-Based Traffic Signal Control Using Deep Reinforcement Learning*. IEEE SusTech 2022
- C51. Z. Bai, **G. Wu***, X. Qi, K. Oguchi, M. Barth. *Cyber-mobility Mirror for Enabling Cooperative Driving Automation: A Co-simulation Platform*. The 101st TRB Annual Meeting, Washington D.C., 2022, January
- C52. X. Zhao, X. Liao, **G. Wu***, M. Barth, Z. Wang, K. Han, P. Tiwari. *Co-Simulation Platform for Modeling and Evaluating Connected and Automated Vehicles in Mixed Traffic*. The 101st TRB Annual Meeting, Washington D.C., 2022, January
- C53. Y. Yang, L. Yang, **G. Wu***, X. Zhao, S. Fang, X. Liao. *A Systematic Review of Autonomous Emergency Braking Technology: Impact Factor, Technology and Performance Evaluation*. The 101st TRB Annual Meeting, Washington D.C., 2022, January
- C54. X. Liao, **G. Wu***, L. Yang, Y. Yang, M. Barth. *Estimating the Impacts of Automatic Emergency Braking (AEB) Technology on Traffic Energy and Emissions*. The 101st TRB Annual Meeting, Washington D.C., 2022, January
- C55. B. Ciuffo et al. *Robotic competitions in the design of future transport systems: The case of JRC AUTOTRAC 2020*. The 101st TRB Annual Meeting, Washington D.C., 2022, January
- C56. S. Liu, Y. Feng, **G. Wu***. *Reservation-based Network Traffic Management Strategy for Connected and Automated Vehicles: A Multiagent System Approach*. 2021 IEEE International Conference of Intelligent Transportation Systems (accepted).
- C57. Z. Zhao, **G. Wu***, M. Barth, et al. *Connected Vehicle-Based Advanced Detection of "Slow-Down" Events on Freeways*. 2021 IEEE International Conference of Intelligent Transportation Systems



(accepted).

- C58. P. Ruan, **G. Wu***, Z. Wei, M. Barth. *A Modularized Electric Vehicle Model-in-the-Loop Simulation for Transportation Electrification Modeling and Analysis*. 2021 IEEE International Conference of Intelligent Transportation Systems (accepted).
- C59. A. Abdo, **G. Wu**, N. Abu-Ghazaleh. *Secure Ramp Merging using Blockchain*. 2021 IEEE Intelligent Vehicle Symposium (accepted).
- C60. Z. Zhao, **G. Wu**, K. Boriboonsomsin, A. Kailas. *Vehicle Dispatching and Scheduling Algorithms for Battery Electric Heavy-Duty Truck Fleets Considering En-Route Opportunity Charging*. 2021 IEEE SusTech Conference (accepted).
- C61. F. Un-Noor, G. Scora, **G. Wu**, K. Boriboonsomsin, H. Perugu, S. Collier, S. Yoon. *Operational Feasibility Assessment of Battery Electric Construction Equipment based on In-Use Activity Data*. The 100th TRB Annual Meeting, Washington D.C., 2021, January
- C62. X. Zhao, A. Abdo, X. Liao, M. Barth, **G. Wu***. *Evaluating Cybersecurity Risks of Cooperative Ramp Merging in Mixed Traffic Environments*. The 100th TRB Annual Meeting, Washington D.C., 2021, January
- C63. X. Liao, X. Zhao, **G. Wu***, M. Barth, Z. Wang, K. Han, S. Avedisov, P. Tiwari. *A Game Theory Based Ramp Merging Strategy for Connected and Automated Vehicles in the Mixed Traffic: A Unity-SUMO Integrated Platform*. The 100th TRB Annual Meeting, Washington D.C., 2021, January
- C64. P. Hao, C. Wang, **G. Wu**, S. Tanvir, B. Sun, J. Holden, A. Duvall, J. Gonder, M. Barth. *Evaluate the System-Level Impact of Connected and Automated Vehicles Coupled with Shared Mobility: An Agent-based Simulation Approach*. The 100th TRB Annual Meeting, Washington D.C., 2021, January
- C65. A. Abdo, **G. Wu**, N. Abu-Ghazaleh. *Secure and Trusted Ramp Merging Using Blockchain*. The 100th TRB Annual Meeting, Washington D.C., 2021, January
- C66. Z. Zhao, Z. Wei, **G. Wu***, M. Barth. *Developing a Data-driven Modularized Model of a Plug-in Hybrid Electric Bus (PHEB) for Connected and Automated Vehicle Applications*. 2020 IEEE International Conference on ITS
- C67. Z. Zhao, **G. Wu***, Z. Wang, M. Barth. *Optimal Control-Based Eco-Ramp Merging System for Connected and Automated Vehicles*. 2020 IEEE on Intelligent Vehicles Symposium
- C68. **G. Wu**, D. Brown, Z. Zhao, P. Hao, M. Barth, K. Boriboonsomsin and Z. Gao. *Dyno-in-the-Loop: An Innovative Hardware-in-the-Loop Development and Testing Platform for Emerging Mobility Technologies*. SAE Technical Paper 2020-01-1057, April
- C69. F. Ye, P. Hao, **G. Wu**, D. Esaid, K. Boriboonsomsin, Z. Gao, T. LaClair, and M. Barth. *Deep Learning-based Queue-aware Eco-Approach and Departure System for Plug-in Hybrid Electric Bus at Signalized Intersections: a Simulation Study*. SAE International World Congress 2020, April
- C70. Z. Wang, X. Liao, X. Zhao, K. Han, P. Tiwari, M. Barth, and **G. Wu***. *A Digital Twin Paradigm: Vehicle-to-Cloud Based Advanced Driver Assistance Systems*. IEEE VTC Spring 2020, Antwerp, Belgium, May
- C71. X. Liao, Z. Wang, D. Oswald, **G. Wu***, K. Boriboonsomsin, M. Barth, K. Han, B. Kim, P. Tiwari. *Cooperative Ramp Merging with Vehicle-to-Cloud Communications: A Field Experiment*. The 99th TRB Annual Meeting, Washington D.C., 2020, January
- C72. N. Williams, A. Vu, **G. Wu**, K. Zhou, M. Barth. *Using RTCM Corrections in a Consumer-Grade Lane-Level Positioning System for Connected Vehicles*. The 99th TRB Annual Meeting,

Washington D.C., 2020, January

- C73. F. Ye, P. Hao, **G. Wu**, K. Boriboonsomsin, Z. Gao, T. LaClair, M. Barth. *Dynamic Queue Prediction at Signalized Intersections with Fusing Sensory Information and Connected Vehicles*. The 99th TRB Annual Meeting, Washington D.C., 2020, January
- C74. D. Esaid, P. Hao, **G. Wu**, F. Ye, K. Boriboonsomsin, M. Barth. *A Machine Learning Approach to Real Time Trajectory Optimization at Connected Signalized Intersections*. The 99th TRB Annual Meeting, Washington D.C., 2020, January
- C75. Z. Wei, Y. Jiang, X. Liao, X. Qi, Z. Wang, **G. Wu**, P. Hao, M. Barth. *End-to-End Vision-Based Adaptive Cruise Control (ACC) Using Deep Reinforcement Learning*. The 99th TRB Annual Meeting, Washington D.C., 2020, January
- C76. Z. Wang, X. Liao, C. Wang, **G. Wu***, K. Boriboonsomsin, M. Barth, K. Han, B. Kim, P. Tiwari. *Driver Behavior Modeling using Game Engine: A Learning-Based Approach*. The 99th TRB Annual Meeting, Washington D.C., 2020, January
- C77. W. Li, **G. Wu***, D. Yao, Y. Zhang, K. Boriboonsomsin, M. Barth. *Stated Acceptance and Behavioral Responses of Drivers towards Innovative Connected Vehicle Applications*. The 99th TRB Annual Meeting, Washington D.C., 2020, January
- C78. A. Kaila et al. *Early Findings from Field Trials of "Eco-Drive" for Heavy-Duty Trucks*. The 99th TRB Annual Meeting, Washington D.C., 2020, January
- C79. Z. Zhao, Z. Wang, **G. Wu***, F. Ye, M. Barth. *The State-of-the-Art of Coordinated Ramp Control with Mixed Traffic Conditions*. 2019 IEEE International Conference on ITS, Auckland, New Zealand, October
- C80. Z. Wang et al. *Recent Field Implementation Results of a Heavy-Duty Truck Connected Eco-Driving System*. 2019 IEEE International Conference on ITS, Auckland, New Zealand, October
- C81. F. Ye, P. Hao, **G. Wu**, D. Esaid, K. Boriboonsomsin, M. Barth. *An Advanced Simulation Framework of an Integrated Vehicle-Powertrain Eco-Operation System for Electric Buses*. 2019 IEEE on Intelligent Vehicles Symposium, Paris, France, June
- C82. Z. Wang, K. Han, B. Kim, **G. Wu***, M. Barth. *Lookup Table-Based Consensus Algorithm for Real-Time Longitudinal Motion Control of Connected and Automated Vehicles*. 2019 American Control Conference, Philadelphia, PA, July
- C83. D. Tian, **G. Wu***, K. Boriboonsomsin, M. Barth, S. Rajab, S. Bai. *Connected Vehicle-Enabled Cooperative Smart Lane Selection Application*. The 98th TRB Annual Meeting, Washington D.C., 2019, January
- C84. Z. Wang, B. Kim, H. Kobayashi, **G. Wu***, M. Barth. *Agent-Based Modeling and Simulation of Connected and Automated Vehicles Using Game Engine: A Cooperative On-Ramp Merging Study*. The 98th TRB Annual Meeting, Washington D.C., 2019, January
- C85. **G. Wu**, P. Hao, Z. Wang, K. Boriboonsomsin, M. Barth. *Eco-Approach and Departure along Signalized Corridors*. The 98th TRB Annual Meeting, Washington D.C., 2019, January
- C86. A. Moretti, J. Luo, **G. Wu**, B. Feenstra, K. Boriboonsomsin, M. Barth. *Understanding Air Quality Data, Traffic, and Weather Parameters Collected from Near-Road Stations*. The 98th TRB Annual Meeting, Washington D.C., 2019, January
- C87. P. Hao, K. Boriboonsomsin, **G. Wu**, Z. Gao, T. LaClair, M. Barth. *Deeply Integrated Vehicle Dynamic and Powertrain Operation for Efficient Plug-in Hybrid Electric Bus*. The 98th TRB Annual Meeting, Washington D.C., 2019, January
- C88. F. Ye, **G. Wu***, K. Boriboonsomsin, M. Barth, S. Rajab, S. Bai. *Development and Evaluation of Lane Hazard Prediction Application for Connected and Automated Vehicles (CAVs)*. 2018 IEEE



- International Conference on Intelligent Transportation Systems, Maui, Hawaii, November
- C89. W. Li, **G. Wu***, D. Yao, Y. Zhang, and M. Barth. *Dynamic En-Route Eco-Navigation: Strategy Design, Implementation and Evaluation*. 2018 IEEE International Conference on Intelligent Transportation Systems, Maui, Hawaii, November
- C90. Z. Wang, **G. Wu***, M. Barth. *A Review on Cooperative Adaptive Cruise Control (CACC) Systems: Architectures, Controls, and Applications*. 2018 IEEE International Conference on Intelligent Transportation Systems, Maui, Hawaii, November
- C91. N. Williams, **G. Wu***, K. Boriboonsomsin, M. Barth, S. Rajab, S. Bai. *Anticipatory Lane Change Warning using Vehicle-to-Vehicle Communications*. 2018 IEEE International Conference on Intelligent Transportation Systems, Maui, Hawaii, November
- C92. N. Williams, **G. Wu***, P. Closas. *Impact of Positioning Uncertainty on Eco-Approach and Departure of Connected and Automated Vehicles*. IEEE PLAN ION conference, 2018
- C93. Z. Wang, **G. Wu***, M. Barth. *Distributed Consensus-Based Cooperative Highway On-Ramp Merging Using V2X Communications*. SAE World Congress Technical Paper, 2018
- C94. P. Hao, C. Wang, **G. Wu**, K. Boriboonsomsin, M. Barth. *Evaluating the Environmental Impact of Traffic Congestion Based on Sparse Mobile Crowd-sourced Data*. IEEE Sustain 2017
- C95. P. Hao, K. Boriboonsomsin, C. Wang, **G. Wu**, M. Barth. *Connected Eco-Approach and Departure (EAD) System for Diesel Trucks*. Transportation Research Board Annual Meeting, 2018
- C96. C. Wang, P. Hao, **G. Wu**, M. Barth. Predicting the Number of Uber Pickups by Deep Learning. Transportation Research Board Annual Meeting, 2018
- C97. X. Shan, X. Chen, P. Hao, K. Boriboonsomsin, **G. Wu**, M. Barth. *Vehicle Energy/Emissions Estimation Based on Vehicle Trajectory Reconstruction Using Sparse Mobile Sensor Data*. Transportation Research Board Annual Meeting, 2018
- C98. X. Qi, P. Wang, **G. Wu***, K. Boriboonsomsin, M. Barth. *Energy and Mobility Benefits from Connected Ecodriving for Electric Vehicles*. 2017 IEEE International Conference on Intelligent Transportation Systems, Yokohama, Japan, October 16 - 19
- C99. Z. Wang, **G. Wu***, P. Hao, M. Barth. *Cluster-Wise Cooperative Eco-Approach and Departure Application along Signalized Arterials*. 2017 IEEE International Conference on Intelligent Transportation Systems, Yokohama, Japan, October 16 – 19, 2017
- C100. P. Hao, Z. Wang, **G. Wu**, K. Boriboonsomsin, M. Barth. *Intra-Platoon Vehicle Sequence Optimization for Eco-Cooperative Adaptive Cruise Control*. 2017 IEEE International Conference on Intelligent Transportation Systems, Yokohama, Japan, October 16 - 19
- C101. D. Tian, **G. Wu***, K. Boriboonsomsin, M. Barth. *A Co-Benefit and Tradeoff Evaluation Analysis Framework for Connected Vehicle Applications*. 2017 IEEE on Intelligent Vehicles Symposium, Redondo Beach, California, June 11 – 14
- C102. X. Qi, Y. Luo, **G. Wu***, K. Boriboonsomsin, M. Barth. *Deep Reinforcement Learning-Based Vehicle Energy Efficiency Autonomous Learning System*. 2017 IEEE on Intelligent Vehicles Symposium, Redondo Beach, California, June 11 – 14
- C103. Z. Wang, **G. Wu***, P. Hao, K. Boriboonsomsin, M. Barth. *Developing a Platoon-Wide Eco-Cooperative Adaptive Cruise Control (CACC) System*. 2017 IEEE on Intelligent Vehicles Symposium, Redondo Beach, California, June 11 – 14
- C104. D. Tian, **G. Wu***, P. Hao, K. Boriboonsomsin, M. Barth, J. Hu. *Optimal Lane Sequence Guidance Based on Connected Vehicles*. Proceedings of 1st World Transport Convention, Beijing, China, June 4 – 6
- C105. **G. Wu**, X. Qi, D. Kari, K. Boriboonsomsin, M. Barth, J. Hu. *Development of Agent-Based On-*

line Adaptive Signal Control (ASC) Framework Using Connected Vehicle (CV) Technology. Proceedings of 1st World Transport Convention, Beijing, China, June 4 – 6

- C106.** Z. Wang, **G. Wu***, M. Barth. *Developing a Distributed Consensus Based Cooperative Adaptive Cruise Control (CACC) System.* Transportation Research Board Annual Meeting, 2017
- C107.** W. Li, **G. Wu***, K. Boriboonsomsin, M. Barth, S. Rajab, S. Bai, and Y. Zhang. *Development and Evaluation of High-Speed Differential Warning Application using Vehicle-to-Vehicle Communication.* Transportation Research Board Annual Meeting, 2017
- C108.** **G. Wu**, L. Pham, P. Hao, H. Jung, and K. Boriboonsomsin. *Measurement and Estimation of Particulate Matter Concentration on Highways in Southern California.* Transportation Research Board Annual Meeting, 2017
- C109.** P. Hao, **G. Wu**, K. Boriboonsomsin, and M. Barth. *Eco-Approach and Departure (EAD) Application for Actuated Signals in Real-World Traffic.* Transportation Research Board Annual Meeting, 2017
- C110.** P. Hao, R. Ma, X. Shan, **G. Wu**, K. Boriboonsomsin, and M. Barth. *Evaluating Configurations of Managed Lane Access Control Using Multi-Commodity Link-Node Cell Transmission Model.* Transportation Research Board Annual Meeting, 2017
- C111.** C. Wang, P. Hao, **G. Wu**, X. Qi, T. Lyu, and M. Barth. *Intersection and Stop Bar Position Extraction from Crowdsourcing GPS Trajectories Data.* Transportation Research Board Annual Meeting, 2017
- C112.** F. Ye, P. Hao, X. Qi, **G. Wu**, K. Boriboonsomsin, and M. Barth. *Prediction-based Eco-Approach and Departure Strategy in Congested Urban Traffic.* Transportation Research Board Annual Meeting, 2017
- C113.** X. Shan, P. Hao, K. Boriboonsomsin, **G. Wu**, M. Barth, and X. Chen. *Partially Limited Access Design Methodology for Freeway High Occupancy Vehicle Lanes.* Transportation Research Board Annual Meeting, 2017
- C114.** D. Tian, W. Li, **G. Wu***, K. Boriboonsomsin, M. Barth, S. Rajab, and S. Bai. *Evaluating the Effectiveness of V2V-based Lane Speed Monitoring Application: A Simulation Study.* 2016 IEEE Conference on Intelligent Transportation Systems
- C115.** F. Ye, **G. Wu***, K. Boriboonsomsin, and M. Barth. *A Hybrid Approach to Estimating Electric Vehicle Energy Consumption for Eco-driving Applications.* 2016 IEEE Conference on Intelligent Transportation Systems
- C116.** X. Shan, P. Hao, X. Chen, K. Boriboonsomsin, **G. Wu**, and M. Barth. *Probabilistic Model for Vehicle Trajectories Reconstruction Using Sparse Mobile Sensor Data on Freeways.* 2016 IEEE Conference on Intelligent Transportation Systems
- C117.** W. Li, **G. Wu***, M. Barth, and Y. Zhang. *Safety, Mobility and Environmental Sustainability of Eco-Approach and Departure Application at Signalized Intersections: A Simulation Study.* 2016 IEEE on Intelligent Vehicles Symposium, Gothenburg, Sweden, June 19 – 22
- C118.** P. Hao, **G. Wu**, K. Boriboonsomsin, and M. Barth. *Modal Activity-Based Vehicle Energy/Emissions Estimation Using Sparse Mobile Sensor Data.* Transportation Research Board Annual Meeting, Washington D.C., January 10-14, 2016
- C119.** N. Williams, K. Boriboonsomsin, **G. Wu** and M. Barth. *Environmental and Mobility Impacts of Large-Scale Adoption of Eco-Driving: An Urban Arterial Case.* 95th Transportation Research Board Annual Meeting, Washington D.C., January 10-14, 2016
- C120.** X. Qi, **G. Wu**, K. Boriboonsomsin and M. Barth. *A Data-Driven Reinforcement Learning-Based Real-Time Energy Management System for Plug-in Hybrid Electric Vehicles with Charging*



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- C121.** **G. Wu**, **D. Kari**, **X. Qi**, K. Boriboonsomsin and M. Barth. *Developing and Evaluating an Eco-Speed Harmonization Strategy for Connected Vehicles*. 2015 IEEE ICCVE.
- C122.** P. Hao, **G. Wu**, K. Boriboonsomsin, and M. Barth. *Preliminary Evaluation of Field Testing on Eco-Approach and Departure (EAD) Application for Actuated Signals*. 2015 IEEE ICCVE.
- C123.** **X. Qi**, **G. Wu***, K. Boriboonsomsin, M. Barth. *A Novel Blended Real-time Energy Management Strategy for Plug-in Hybrid Electric Vehicle Commute Trips*. 2015 IEEE Conference on Intelligent Transportation Systems
- C124.** **X. Qi**, **G. Wu***, K. Boriboonsomsin, M. Barth. *Evolutionary Algorithm Based On-Line PHEV Energy Management System with Self-Adaptive SOC Control*. 2015 IEEE on Intelligent Vehicles Symposium, Seoul, Korea. June 28 – July 1.
- C125.** P. Hao, **G. Wu**, K. Boriboonsomsin, M. Barth. *Developing a Framework of Eco-Approach and Departure Application for Actuated Signal Control*. 2015 IEEE on Intelligent Vehicles Symposium, Seoul, Korea. June 28 – July 1.
- C126.** **G. Wu**, K. Boriboonsomsin and M. Barth. *Comparative Analysis of Empirical Capacities between Freeways with Different Types of High-Occupancy Vehicle (HOV) Access Control*. 94th Transportation Research Board Annual Meeting, Washington D.C., January 11-15, 2015
- C127.** K. Boriboonsomsin, **G. Wu**, P. Hao and M. Barth. *Fusion of Vehicle Weight and Activity Data for Improved Vehicle Emission Modeling*. 94th Transportation Research Board Annual Meeting, Washington D.C., January 11-15, 2015
- C128.** **X. Qi**, **G. Wu***, K. Boriboonsomsin, M. Barth. *Comparative Study of Lane Changing Characteristics on Different Types of HOV Facilities Using Smoothed Aerial Photo Data*. 94th Transportation Research Board Annual Meeting, Washington D.C., January 11-15, 2015
- C129.** **P. Hao**, **G. Wu***, **P. Saikaly**. *Evaluation of sampling strategies for vehicular emission estimation using probe vehicles*. 94th Transportation Research Board Annual Meeting, Washington D.C., January 11-15, 2015
- C130.** **X. Qi**, **G. Wu***, K. Boriboonsomsin, M. Barth. *An On-Line Energy Management Strategy for Plug-in Hybrid Electric Vehicles Using Estimation Distribution Algorithm*. 2014 IEEE on Intelligent Transportation Systems Conference, Qingdao, China.
- C131.** **D. Kari**, **G. Wu***, M. Barth. *Development of an Agent-Based Online Adaptive Signal Control Strategy Using Connected Vehicle Technology*. 2014 IEEE on Intelligent Transportation Systems Conference, Qingdao, China.
- C132.** P. Hao, K. Boriboonsomsin, **G. Wu**, M. Barth. *Probabilistic Model for Estimating Vehicle Trajectories Using Sparse Mobile Sensor Data*. 2014 IEEE on Intelligent Transportation Systems Conference, Qingdao, China.
- C133.** **D. Kari**, **G. Wu*** and M. Barth. *Eco-Friendly Freight Signal Priority Using Connected Vehicle Technology: A Multi-Agent System Approach*. 2014 IEEE on Intelligent Vehicles Symposium, Dearborn, Michigan, USA.
- C134.** **Q. Jin**, **G. Wu***, K. Boriboonsomsin and M. Barth. *Improving Traffic Operations Using Real-Time Optimal Lane Selection with Connected Vehicle Technology*. 2014 IEEE on Intelligent Vehicles Symposium, Dearborn, Michigan, USA.
- C135.** **G. Wu**, K. Boriboonsomsin and M. Barth. *Supplementary Benefits from Partial Vehicle Automation in an Eco-Approach/Departure Application at Signalized Intersections*. 93rd Transportation Research Board Annual Meeting, Washington D.C., January, 2014

- C136.** Y. Du, **G. Wu***, K. Boriboonsomsin and C-Y Chan. *Empirical Study on Lane Changing Behaviors along Different Types of High-Occupancy vehicle Lanes in California*. 92nd Transportation Research Board Annual Meeting, Washington D.C., January 13-17, 2013
- C137.** Q. Jin, **G. Wu***, K. Boriboonsomsin, M. Barth. *Platoon-Based Multi-Agent Intersection Management for Connected Vehicles*. 2013 IEEE Conference on Intelligent Transportation Systems.
- C138.** Q. Yang, **G. Wu***, K. Boriboonsomsin, M. Barth. *Arterial Roadway Travel Time Distribution Estimation and Vehicle Movement Classification Using a Modified Gaussian Mixture Model*. 2013 IEEE Conference on Intelligent Transportation Systems.
- C139.** H. Xia, **G. Wu**, K. Boriboonsomsin, M. Barth. *Development and Evaluation of an Enhanced Eco-Approach Traffic Signal Application for Connected Vehicles*. 2013 IEEE Conference on Intelligent Transportation Systems.
- C140.** **G. Wu**, K. Boriboonsomsin, M. Barth. *Development and Evaluation of Intelligent Energy Management Strategy for Plug-in Hybrid Electric Vehicle*. 92nd Transportation Research Board Annual Meeting, Washington D.C., January 13-17, 2013
- C141.** L. Zhang and **G. Wu**. *Dynamic Lane Grouping at Isolated Intersections: Problem Formulation and Performance Analysis*. 91st Transportation Research Board Annual Meeting, Washington D.C., January 22-26, 2012
- C142.** Q. Jin, **G. Wu***, K. Boriboonsomsin, M. Barth. *Multi-Agent Intersection Management for Connected Vehicles using an Optimal Scheduling Approach*. ICCVE 2012, Beijing, China.
- C143.** **G. Wu**, K. Boriboonsomsin, L. Zhang, M. Barth. *Simulation-Based Benefit Evaluation of Dynamic Lane Grouping Strategies at Isolated Intersections*. 2012 IEEE Conference on Intelligent Transportation Systems.
- C144.** Q. Jin, **G. Wu***, K. Boriboonsomsin, M. Barth. *Advanced Intersection Management for Connected Vehicles Using a Multi-Agent Systems Approach*. 2012 IEEE on Intelligent Vehicles Symposium.
- C145.** Y. Du, **G. Wu***, K. Jang, C-Y Chan. *Empirical Evaluation of the Impacts of High-Occupancy Vehicle (HOV) Lane Collision on Different Types of Lane Configuration in California*. 91st Transportation Research Board Annual Meeting, Washington D.C., January 22-26, 2012
- C146.** **G. Wu**, Y. Du, K. Jang, C-Y Chan, and K. Boriboonsomsin. *Preliminary Evaluation of Operational Performance between Different Types of HOV Facilities in California: Continuous-Access vs. Limited-Access*. 90th Transportation Research Board Annual Meeting, Washington D.C., January, 2011
- C147.** K. Boriboonsomsin, **G. Wu**, G. Scora, and M. Barth. *Impacts of Goods Movement Pricing on Traffic Congestion and Air Pollution: A Case Study of the Ports of Los Angeles and Long Beach*. 52nd Annual Transportation Research Forum, Mar. 10-12, 2011
- C148.** **G. Wu**, K. Boriboonsomsin, W-B Zhang, M. Li and M. J. Barth. *Energy and Emission Benefit Comparison between Stationary and In-vehicle Advanced Driving Alert Systems*. 89th Transportation Research Board Annual Meeting, Washington D.C., January, 2010
- C149.** J-Q Li, N. Zou and **G. Wu**. *The Models and Algorithm for Investigating the Impacts of Signal Timing on Vehicle Emissions*. INFORMS Annual Meeting 2010, Austin, Texas, Nov. 7 – 10, 2010
- C150.** M. Li, M-K Song, and **G. Wu**. *Online Performance Measurement Method Based on Arterial Infrastructure Data*. 88th Transportation Research Board Annual Meeting, Washington D.C., January 11-15, 2009
- C151.** **G. Wu**, M. Tomizuka, L. Zhang, M. Li and W-B Zhang. *System Performance Optimization at Urban Rail-Highway Grade Crossings Using Online Adaptive Priority Strategy*. 88th



Transportation Research Board Annual Meeting, Washington D.C., January 11-15, 2009

- C152.** G. Wu, W-B Zhang, and M. Li, et al. *Traffic Emission Reduction at Signalized Intersections: A Simulation Study of Benefits of Advanced Driver Information*. 15th World Congress on Intelligent Transport Systems, Nov.16-20, 2008
- C153.** M. Li, G. Wu, Y. Li, F. Bu, and W-B Zhang. *Active Signal Priority for Light Rail Transit at Grade Crossings*. 86th Transportation Research Board Annual Meeting, Washington D.C., January, 2007
- C154.** Y. Li, F. Bu, M. Li, G. Wu, W-B. Zhang, and K. Zhou. *Application of Advanced Detection Data in the Development of an Active Signal Priority System*. 86th Transportation Research Board Annual Meeting, Washington D.C., January, 2007
- C155.** C. Robelin, D. Sun, G. Wu, and A. Bayen. *MILP control of aggregate Eulerian network airspace models*, *American Control Conference*, pp. 5257-5262, Minneapolis, MN, Jun. 14-16, 2006
- C156.** C. Robelin, D. Sun, G. Wu, and A. Bayen. *En-Route Air Traffic Modeling and Strategic Flow Management using Mixed Integer Linear Programming*, *INFORMS Annual Meeting 2005*, New Orleans / San Francisco, Nov. 13-16, 2005

Non-proceedings Conferences

- A1.** X. Zhao, G. Wu*, K. Boriboonsomsin, P. Hao. *Leveraging Infrastructure-Based Perception for Advanced Freight Signal Priority: A Comprehensive Review and Analysis*. I-NUF 2025, USC
- A2.** Z. Zhang, G. Wu*, K. Boriboonsomsin, P. Hao. *Leveraging Advanced Detection and Adaptive Signal Priority to Improve Freight Movement Efficiency: System and Algorithm Development*. I-NUF 2025, USC
- A3.** G. Wu*, X. Zhao, P. Hao, K. Boriboonsomsin. *Quantifying the Environmental and Health Impacts of Curbside Management for Emerging Multi-Modal Mobility Services*, CRC, CARB, Riverside, CA
- A4.** X. Liao, G. Wu*, M. Barth, A. Smolyak. *A Data-Driven Approach to Estimating Environmental Impacts of Traffic Incident Management Strategies*. Urban Complex Systems 2021.
- A5.** X. Zhao, X. Liao, G. Wu*, Z. Wang and K. Han. *Integrated Unity-SUMO-AWS Platform for Evaluating Personalized Human Behaviors in Mixed Traffic*. 28th ITS World Congress, Hamburg, October 11 – 15, 2021
- A6.** G. Scora, K. Boriboonsomsin, F. Un-Noor, G. Wu, et al. *Characterizing In-Use Activity of Construction Equipment in California*. The 30th CRC Workshop.
- A7.** H. Jung, X. Wang, A. Chen, M. Zhang, M. Shiraiwa, M. Princevac, G. Wu, et al. *Real-World Tire and Brake-Wear Emissions*. The 30th CRC Workshop.
- A8.** X. Zhao, X. Liao, G. Wu*, Z. Wang and K. Han. *Integrated Unity-SUMO-AWS Platform for Evaluating Personalized Human Behaviors in Mixed Traffic*. 2021 ITS World Congress
- A9.** G. Wu, L. Zhu, Z. Zhao. *Improving Transportation Sustainability through Shared and Automated Mobility (SAM) with Demand-side Cooperation*. Conference on Sustainability and Emerging Transportation Technology, October 2020
- A10.** Z. Wang, K. Han, X. Liao, X. Zhao, and G. Wu. *Cooperative Ramp Merging Experimental Evaluation: A Vehicle-to-Cloud Digital Twin Approach*. ITS World Congress, Los Angeles, October 2020
- A11.** L. Zhu, Z. Zhao, G. Wu. *Vehicle Dispatching Considering Demand-Side Cooperation for On-demand Shared Automated Mobility: An Online Microscopic Simulation Framework and Modeling*. ASCE ICTD2020
- A12.** J. Luo, A. Moretti, G. Wu, B. Feenstra, K. Boriboonsomsin, M. Barth. *Performance Evaluation of Low-cost Air Quality Sensors at Near-road Air Quality Monitoring Stations*. CARTEEH

Symposium, February 2019

- A13. A. Moretti, J. Luo, **G. Wu**, B. Feenstra, K. Boriboonsomsin, M. Barth. *Understanding Air Quality Data, Traffic, and Weather Parameters Collected from Near-Road Stations*. CARTEEH Symposium, February 2019
- A14. F. Ye, **G. Wu***, K. Boriboonsomsin, M. Barth, S. Rajab, S. Bai. *Traffic Abnormality Predication Application for Connected Automated Vehicles (CAVs) in a Mixed Traffic Environment*. Automated Vehicle Symposium, July 2018
- A15. Y. Lin, **G. Wu***, J. Huang. *An Innovative Street Design to Embrace Low-speed Automated Mobility in a Mixed Traffic Environment ---- A Case Study in Berkeley, CA*. Automated Vehicle Symposium, July 2018
- A16. N. Williams, **G. Wu***, K. Boriboonsomsin, M. Barth, S. Rajab, S. Bai. *Anticipatory Model for Safer Automated Lane Changes*. Automated Vehicle Symposium, July 2018
- A17. Z. Gao, T. LaClair, S. Ou, **G. Wu**, M. Barth. *Electric Vehicle Performance Enhancement over Eco-Driving Cycles Employing CAV Technologies*. SAE World Congress 2018
- A18. P. Hao, X. Shan, K. Boriboonsomsin, **G. Wu**, M. Barth. *Sensitivity Analysis of Buffer Length in Partially Limited Access Design of HOV Facilities*. Transportation Research Board Annual Meeting, 2018 (poster)
- A19. C. Wang, P. Hao, **G. Wu**, M. Barth. *Developing an Eco-Cooperative Real-time Taxi Allocation System*. IEEE SusTech 2017 (poster)
- A20. Z. Wang, **G. Wu***, P. Hao, M. Barth. *Developing a Distributed Cooperative Eco-Approach and Departure System at Signalized Intersections Using V2X Communication*. Automated Vehicle Symposium, July 2017
- A21. P. Hao, Z. Wang, **G. Wu**, K. Boriboonsomsin, M. Barth. *Intra-Platoon Vehicle Sequence Optimization for Eco-Cooperative Adaptive Cruise Control*. Automated Vehicle Symposium, July 2017
- A22. C. Wang, F. Ye, **G. Wu***, M. Barth. *Data-Driven Analysis of Approach and Departure Driving Behaviors at Signalized Intersections*. The 8th International Conference on Applied Human Factors and Ergonomics (AHFE 2017), July 2017, Los Angeles
- A23. F. Ye, C. Wang, **G. Wu***, M. Barth. *Modeling the Real-World Human Driving Behaviors along Signalized Intersections*. The 8th International Conference on Applied Human Factors and Ergonomics (AHFE 2017), July 2017, Los Angeles
- A24. D. Kari, **G. Wu***, K. Boriboonsomsin, M. Barth. *Exploring the Opportunity: Managed Lane as a Testbed for Cooperative Adaptive Cruise Control (CACC)*. Transportation Research Board Annual Meeting, 2017 (poster)
- A25. **G. Wu**, P. Hao, D. Kari, K. Boriboonsomsin, and M. Barth. *Developing an Eco-Cooperative Adaptive Cruise Control (Eco-CACC) System*. Automated Vehicle Symposium, July 2016
- A26. F. Ye, P. Hao, **G. Wu**, K. Boriboonsomsin, and M. Barth. *Eco-Approach and Departure Strategy in Mixed Connected Vehicle Environment*. Automated Vehicle Symposium, July 2016
- A27. X. Qi, **G. Wu***, P. Wang, K. Boriboonsomsin, and M. Barth. *Estimating Energy and Mobility Benefits from Eco-approach/Departure System for Electric Vehicles*. Automated Vehicle Symposium, July 2016
- A28. X. Qi, **G. Wu***, K. Boriboonsomsin, and M. Barth. *Evolutionary Algorithm Based On-Line Energy Management System for Plug-in Hybrid Electric Vehicles*. GECCO 2016, Denver, July 21 – 23
- A29. **G. Wu**, M. Barth, K. Boriboonsomsin. *GlidePath: Eco-Friendly Automated Approach/Departure at Signalized Intersections*. Automated Vehicle Symposium, July 2015



- A30. P. Su, B. Park, **G. Wu**. *Improving Managed Lane Operations through a Lane-Changing Assistance System*. Automated Vehicle Symposium, July 2015
- A31. **G. Wu**, Q. Jin and K. Boriboonsomsin. *Improve Traffic Operation at Signalized Intersections Using Four Quadrant Connection Roadways*. The Transportation Research Board's 2014 Alternative Intersections & Interchanges Symposium, Salt Lake City UT, July 20-23, 2014.
- A32. M. Barth, K. Boriboonsomsin and **G. Wu**. *The Potential Role of Vehicle Automation in Reducing Traffic-Related Energy and Emissions*. IEEE on ICCVE 2013, Las Vegas, USA.
- A33. **G. Wu**, K. Boriboonsomsin and M. Barth. *Fusion of Vehicle Weight and Activity Data for Improved Vehicle Emission Modeling*. 2013 Sustainable Goods Movement Symposium, Palm Desert, November

Research Report/Technical Note

- R1. A. Vyas, H. Jung, **G. Wu**, T. Zhan, S. Yoon, K. Boriboonsomsin. *Battery Electric Vehicle Energy Efficiency: Systematic Review and Meta-Analysis of Enabling Technologies*. Final Report for CARB, September 2025
- R2. **G. Wu**, C. Wei, J. Farrell. *Vulnerable Road User (VRU): Accurate and Reliable Detection for Roadside-Assisted Cooperative Driving*. Final Report for Caltrans, May 2025,
- R3. X. Zhao, **G. Wu***, H. Jung. *Understanding Real-World Brake Activity: A Key to Assessing Non-Tailpipe Emission Sources for Sustainable Transportation and Communities*. Final Report for NCST, March 2025
- R4. P. Hao, H. Liu, **G. Wu**, M. Barth. *Evaluating the Impact of Clean Miles Standard on Transportation System: A Microscopic Simulation in San Francisco*. Final Report for PSR, April 2024
- R5. Y. Liao, R. Yao, **G. Wu***, Z. Huang, O. Osman. *Development of an Analysis, Modeling, and Simulation Framework for Connected and Automated Trucks*. Interim Report for US DOT. February 2024
- R6. **G. Wu**, D. Peng, K. Boriboonsomsin. *Developing an Efficient Dispatching Strategy to Support Commercial Fleet Electrification*. Final Report for NCST. June 2023, 40 p. (e-file)
- R7. J. Luo, Y. Liao, **G. Wu**. *Develop a Performance Metric to Quantify the Inhalation of Traffic-related Air Pollutants at Mesoscale*. November 2022, 15 p.
- R8. **G. Wu**, X. Zhao, X. Liao, K. Boriboonsomsin. *Connectivity-Based Cooperative Ramp Merging in Multimodal and Mixed Traffic Environment*. Final Report for PSR METRANS UTC, September 2022, 39 p.
- R9. **G. Wu**, X. Zhao, P. Hao, J. Luo, A. Venkatram. *Quantifying the Environmental and Health Impacts of Curbside Management for Emerging Multi-modal Mobility Services*. Final Report for CARTEEH, June 2022, 31 p.
- R10. J. A. Farrell, **G. Wu**, W. Hu, D. Oswald, P. Hao. *Lane-Level Localization and Map Matching for Advanced Connected and Automated Vehicle (CAV) Applications*. Final Report for NCST. April 2022, 68 p.
- R11. **G. Wu**, Z. Wei, D. Oswald, P. Hao, M. Barth. *Assessing Roadway Infrastructure for Future Connected and Automated Vehicle Deployment in California*. Final Report for UC-ITS Program, December 2021, 54 p
- R12. K. Boriboonsomsin, S. Tanvir, Z. Wei, P. Hao, **G. Wu**. *Alternative HOV Lane Operational Strategies for Congestion Mitigation in California*. Final Report for Caltrans, September 2021, 61 p
- R13. **G. Wu**, X. Liao, L. Yang, M. Barth. *Estimating the Impacts of Automatic Emergency Braking (AEB)*

- Technology on Traffic Energy and Emissions*. Final Report for PSR UTC, June 2021, 33 p.
- R14.** **G. Wu**, **Z. Zhao**, M. Barth. *Connected Vehicle-based Advanced Detection of “Slow-Down” Events on Freeways*. Final Report for Honda Research Institute-US, March 2021, 27 p
- R15.** **G. Wu**, **Z. Bai**, M. Barth. *Preliminary Evaluation of Roadside Sensing based Real-time Cyber Mobility Mirror (CMM) Prototype in Simulation*. Final Report for TOYOTA ITC project (Pre-phase), February 2021, 27 p
- R16.** **G. Wu**, **X. Liao**, **X. Zhao**, M. Barth. *Developing Situation Awareness Capability for Connected Vehicle (CV) Applications in Mixed Traffic using “Digital Twin” Framework*. Final Report for TOYOTA ITC project (Year 3), January 2021, 31 p
- R17.** **G. Wu**, **Z. Zhao**, **Z. Wang**, M. Barth. *Development of Eco-Friendly Ramp Control for Connected and Automated Electric Vehicles*. February 2020, 41 p
- R18.** **G. Wu**, **Z. Wang**, **X. Liao**, K. Boriboonsomsin, M. Barth. *Evaluating Connected Vehicle Applications in a Mixed Traffic Environment using a “Digital Twin” Approach*. Final Report for TOYOTA ITC project (Year 2), January 2020, 34 p
- R19.** J. Luo, A. Moretti, **G. Wu**. *Quantifying Traffic Congestion-Induced Change of Near-Road Air Pollutant Concentration*. Final Report for CARTEEH project, June 2019, 26 p
- R20.** **G. Wu**, **F. Ye**, P. Hao, **D. Esaid**, K. Boriboonsomsin, M. Barth. *Deep Learning-based Eco-driving System for Battery Electric Vehicles*. Final Report for NCST project, February 2019, 35 p
- R21.** **Z. Wang**, **G. Wu***, K. Boriboonsomsin, M. Barth. *Evaluating Connected Vehicle Applications in a Mixed Traffic Environment using a “Digital Twin” Approach*. Final Report for TOYOTA ITC project (Year 1), January 2019, 22 p
- R22.** K. Boriboonsomsin, **G. Wu**, P. Hao, H. Xia, and N. Williams. *Calibration of Traffic Microsimulation Models for Microscopic Vehicle Emission Modeling*. Final Report for UCTC project, 2018, 37 p
- R23.** **G. Wu**, **D. Tian**, K. Boriboonsomsin, and M. Barth. *Traffic Jam Prevention (TJP) Application Effectiveness Analysis*. Final Report for Honda’s V2X project (Phase III), March 2018, 23 p
- R24.** **G. Wu**, **D. Tian**, **N. Williams**, **F. Ye**, K. Boriboonsomsin, and M. Barth. *Connected and Automated Vehicle (CAV) Applications Effectiveness Analysis*. Final Report for Honda’s V2X project (Phase II), February 2018, 83 p (including Appendix)
- R25.** **D. Tian**, **W. Li**, **G. Wu***, M. Barth. *Examining the Safety, Mobility and Environmental Sustainability CoBenefits and Tradeoffs of Intelligent Transportation Systems*, NCST Report, 2017
- R26.** **G. Wu**, **D. Tian**, M. Barth, **W. Li**, and K. Boriboonsomsin. *V2X Connected Vehicle Early Deployment Application Analysis*. Final Report for Honda’s V2X project (Phase I), September 2016, 85 p
- R27.** **G. Wu**. *Boosting MPG of Plug-in Hybrid Electric Vehicles via Reliable Information*. NCST Policy Brief, August 2016
- R28.** **G. Wu**, **X. Qi**, M. Barth and K. Boriboonsomsin. *Advanced Energy Management Strategy Development for Plug-in Hybrid Electric Vehicles*. NCST Report, May 2016, 44 p
- R29.** M. Barth, **G. Wu**, K. Boriboonsomsin. *Intelligent Transportation Systems Show Promise in Reducing Energy Consumption and Greenhouse Gas Emissions*. NCST Policy Brief, March 2016
- R30.** **G. Wu**, M. Barth, K. Boriboonsomsin and et al. *GlidePath Prototype Development (UCR part)*. FHWA DTFH61-12-D-00020, December 2015, 32 p
- R31.** M. Barth, **G. Wu**, P. Hao and et al. *Advanced Traffic Signalization: Extending the Eco-Approach and Departure Application Research to Actuated Traffic Signals (UCR part)*. FHWA Exploratory Advanced Research (EAR) Program, December 2015, 100 p



- R32.** G. Wu, X. Qi, D. Kari, and M. Barth. *Development of Agent-Based On-line Adaptive Signal Control (ASC) Framework Using Connected Vehicle (CV) Technology*. UCCONNECT working paper, December 2015, 24 p
- R33.** M. Barth, G. Wu, D. Kari and K. Boriboonsomsin. *AERIS: Eco-Lanes Operational Scenario Modeling Report*. December 2014, 128 p
- R34.** M. Barth, G. Wu, H. Xia and K. Boriboonsomsin. *AERIS: Eco-Signal Operations Operational Scenario Modeling Report*. May 2014, 241 p
- R35.** M. Barth, G. Wu, H. Xia and K. Boriboonsomsin. *AERIS: Identification and Evaluation of Transformative Environmental Applications and Strategies Project – Connected Eco-Driving Application Modeling Results*. March 2014, 45 p
- R36.** K. Boriboonsomsin, G. Scora, G. Wu and M. Barth. *Deployment of Prior HOV Lanes Research Results in Developing Analysis Tools for New Managed Lanes Projects*. Final report to California Department of Transportation, May 2014, 49 p
- R37.** G. Wu, M. Barth, K. Boriboonsomsin. *Eco-Routing Navigation System for Electric Vehicles*. Final report for California Energy Commission, 11-01 TE, May 2014, 38 p
- R38.** M. Barth, G. Wu, H. Xia and K. Boriboonsomsin. *AERIS: Identification and Evaluation of Transformative Environmental Applications and Strategies Project – Eco-Approach and Departure at Signalized Intersections Application Modeling Results*. October 2013, 56 p
- R39.** K. Boriboonsomsin, G. Wu, M. Barth. *High Occupancy Vehicle (HOV) System Analysis Tools – District 8 HOV Facility Performance Analysis*. For Caltrans, 2012
- R40.** G. Wu, K. Boriboonsomsin, M. Barth. *Development and Evaluation of Intelligent Energy Management Strategies for Plug-in Hybrid Electric Vehicles*. UCTC-FR-2012-09
- R41.** L. Zhang, K. Zhou, J-Q Li, W-B Zhang, M. Li, G. Wu, S. Sun. *Development of an Integrated Adaptive Transit Signal Priority (ATSP) and Dynamic Passenger Information (DPI) System*. UCB-ITS-PRR-2011-, PATH at UC Berkeley, August 2011.
- R42.** K. Boriboonsomsin, G. Scora, G. Wu, M. Barth. *Improving Vehicle Fleet, Activity, and Emissions Data for On-Road Mobile Sources Emissions Inventories*. Prepared for Federal Highway Administration, August 2011.
- R43.** M. Li, L. Zhang, M-K Song, G. Wu, W-B Zhang, L. Zhang, Y. Yin. *Improving Performance of Coordinated Signal Control Systems Using Signal and Loop Data*. UCB-ITS-PRR-2010-07, PATH at UC Berkeley, March 2010.
- R44.** G. Wu, Y. Li, W-B Zhang, S. Johnston, M. Li, K. Zhou. *Grade Crossing/Traffic Signal Optimization Study*. TECH NOTE 2010-01, PATH at UC Berkeley, April 2010
- R45.** M. Li, K. Zhou, W-B Zhang, Y. Li, G. Wu, F. Bu, S. Sun, K. Leung, J. Lau. *Field Operational Tests of Adaptive Transit Signal Priority Systems*. UCB-ITS-PRR-2010-35, PATH at UC Berkeley, June 2010.
- R46.** M. Barth, K. Boriboonsomsin, G. Wu, G. Scora, M. Todd. *Congestion and Air Quality Evaluation of Goods Movement Pricing*. Prepared for Federal Highway Administration, September 2010.
- R47.** M. Li, G. Wu, S. Johnston, and W-B Zhang. *Analysis toward Mitigation of Congestion and Conflicts at Light Rail Grade Crossings and Intersections*. UCB-ITS-PRR-2009-09, PATH at UC Berkeley, January 2009
- R48.** G. Wu, Y. Li, W-B Zhang, S. Johnston, M. Li, K. Zhou. *SPRINTER Rail: Grade Crossing/Traffic Signal Optimization Study*. UCB-ITS-PRR-2009-21, PATH at UC Berkeley, March 2009

TEACHING EXPERIENCE

1. Fall/2025 EE175 Senior Design (Synergetic Efforts with EcoCAR Program) at UC Riverside (co-instructor)
2. Spring 2025 EE266 Advanced Topics in Connected and Automated Transportation Systems at UC Riverside
3. Winter/2025 EE236 State and Parameter Estimation at UC Riverside
4. Winter/2025 EE175 Senior Design (Synergetic Efforts with EcoCAR Program) at UC Riverside (co-instructor)
5. Fall/2024 EE175 Senior Design (Synergetic Efforts with EcoCAR Program) at UC Riverside (co-instructor)
6. Summer/2024 ENGR-482 Introduction to Sustainable Transportation at UC Riverside Extension (co-instructor)
7. Winter/2024 EE175 Senior Design (Synergetic Efforts with EcoCAR Program) at UC Riverside (co-instructor)
8. Fall/2024 EE175 Senior Design (Synergetic Efforts with EcoCAR Program) at UC Riverside (co-instructor)
9. Summer/2023 ENGR-482 Introduction to Sustainable Transportation at UC Riverside Extension (co-instructor)
10. Spring/2023 EE246 Intelligent Transportation Systems at UC Riverside (co-instructor)
11. Winter/2023 EE175 Senior Design (Synergetic Efforts with EcoCAR Program) at UC Riverside (co-instructor)
12. Fall/2022 EE175 Senior Design (Synergetic Efforts with EcoCAR Program) at UC Riverside (co-instructor)
13. Spring/2022 EE246 Intelligent Transportation Systems at UC Riverside (co-instructor)
14. Spring/2021 EE246 Intelligent Transportation Systems at UC Riverside (co-instructor)
15. Spring/2021 CE4990/5990 Emerging Trends of Sustainable and Intelligent Transportation Systems at Cal Poly Pomona (lecturer)
16. Spring/2020 CE5990 Emerging Trends of Sustainable and Intelligent Transportation Systems at Cal Poly Pomona (lecturer)
17. Spring/2020 EE246 Intelligent Transportation Systems at UC Riverside (co-instructor)
18. Fall/2018 EE246 Intelligent Transportation Systems at UC Riverside (co-instructor)
19. Spring/2016 EE246 Intelligent Transportation Systems at UC Riverside (co-instructor)
20. Spring/2016 CE695 Individual Research in ITS at Cal Poly Pomona (Advisor)
21. Winter/2016 CE695 Individual Research in ITS at Cal Poly Pomona (Advisor)
22. Fall/2015 CE695 Individual Research in ITS at Cal Poly Pomona (Advisor)
23. Spring/2015 CE695 Individual Research in ITS at Cal Poly Pomona (Advisor)
24. Winter/2015 CE695 Individual Research in ITS at Cal Poly Pomona (Advisor)
25. Fall/2014 CE695 Individual Research in ITS at Cal Poly Pomona (Advisor)
26. Winter/2014 EE246 Intelligent Transportation Systems at UC Riverside (co-instructor)
27. Spring/2013 EE246 Intelligent Transportation Systems at UC Riverside (co-instructor)
28. Spring/2012 EE246 Intelligent Transportation Systems at UC Riverside (co-instructor)

INVITED PRESENTATION

1. Title: *Not All Drivers Are the Same – A Glimpse of Personalized Driving Behavior Research*. Invited Talk by CICTP, July 2025



2. Title: *Better Situational Awareness with Connectivity: Moving from A(ssistance) to C(oooperation)*, Invited Talk by Chinese SAE, September 2024
3. Title: *From Infrastructure-Assisted Perception to Vehicle-Infrastructure Cooperation*, Tsingdao, China, June 2024
4. Title: *Integrated Simulation Platform for Quantifying the Traffic-Induced Environmental and Health Impacts*, CRC-Mobile Source Air Toxic, CARB, February 2024
5. Title: *Deep Learning-Based Cooperative Perception Framework for Driving Automation*. Guangzhou University, July 2023
6. Title: *Roadside Sensing to Enable Cooperative Automated Driving in Mixed Traffic*. ITS World Congress, September 2022
7. Title: *Cyber Mobility Mirror: Cyber Mobility Mirror: A Roadside Sensor Enabling Technology for Cooperative Driving Automation in a Mixed Traffic Environment*. AAEOY Annual Conference, August 2022
8. Title: *CAV-enabled Cooperative Ramp Merging Management*. National Infrastructure Owner/Operator Meeting, September 2020
9. Title: *New Simulation Tools for Training and Testing Automated Vehicles*, AVS 2020, July, panelist.
10. Title: *Distributed Consensus-Based Cooperative Highway On-Ramp Merging Using V2X Communications*, Workshop at IEEE IV'18, June 2018, Changshu, Jiangsu Province, China
11. Title: *An Introduction of Environmentally-Friendly Connected and Automated Transportation Systems (EFCATS) Research at CE-CERT*, Horiba Annual Conference, January 2018
12. Title: *A Glimpse at the Environmentally Friendly Connected and Automated Transportation System (EFCATS)*, Tongji University, October 2017
13. Title: *Eco-Approach/Departure: A Promising Connected & Automated Vehicle Application in the Urban Environment*, CTE Association Meeting, February 2017
14. Title: *The Environment Implications of Connected/Automated Vehicles (CAVs) and Infrastructure*. UCCONNECT Summer Training Program, June 2016
15. Title: *Embracing the Era of Connected/Automated Vehicles*. Caltrans D12 CAV Course Planning, May 2016
16. Title: *An Introduction of Environmentally-Friendly Connected & Automated Transportation System (CATS) – A Glimpse at ITS*. 2016 UCCONNECT Annual Student Conference, February
17. Title: *Development and Evaluation of Intelligent Energy Management Strategies for Plug-in Hybrid Electric Vehicles*. SYSU-CMU Joint Institute of Engineering, October 2015
18. Title: *A Brief Introduction on Connected Vehicles (CV)*. Chinese Academy of Sciences – Shanghai Advanced Research Institute, October 2015
19. Title: *Connected/Automated Vehicles (CAVs) and Their Impacts on Environment*. UCCONNECT Summer Training Program, June 2015
20. Title: *A Short Course on Connected Vehicles (CV) — In the Era of Internet of Things (IoT)*. UC Riverside MBA Program, May 2015
21. Title: *Connected/Automated Vehicle (C/AV) Technology and Its Impacts on the Environment*. UC Riverside ECE Department Colloquium, April 2015
22. Title: *Eco-Lanes: Preliminary Modeling Results*. 94th Transportation Research Board Annual Meeting, Washington D. C., January 2015
23. Title: *What We May Gain in the Driverless World – From the Energy/Emission Perspective*. PacTrans Annual Conference, Seattle, WA, October 2014
24. Title: *Summary of California D8 HOV Facilities Operational Performance Analysis*. 92nd

Transportation Research Board Annual Meeting, Washington D. C., January 2013

25. Title: *D8 HOV Facilities Operational Performance Analysis and Tools Development*. Research Connect, Caltrans, Sacramento, December 2012
26. Title: *Using ITS to Improve Energy Efficiency*. ITS California, Sacramento, September 2012
27. Title: *Develop Eco-Driving Assistance Systems – Value of Traffic Signal Status Information*. CERT-RUSD Series Seminar, October 2011
28. Title: *Congestion and Air Quality Evaluation of Goods Movement Pricing*. Board of Advisor Meeting at CE-CERT, UC Riverside, March 2011

PROJECTS INVOLVED

Note: PI (including proposal drafter) ~ \$5,648,975; Co-PI ~ \$5,187,533.

1. 03/2024 – 06/2026 Enabling Next-Generation Sustainable Traffic Management via Advanced Sensing and Foundation Models (as Co-PI, OASIS Program, \$50,000)
2. 06/2024 – 05/2026 Leveraging Advanced Detection and Adaptive Signal Priority to Improve Freight Movement Efficiency along SR 29 – SR 53 Corridor (as PI, California Department of Transportation, \$462,517)
3. 03/2024 – 02/2026 Assessment of Electric Vehicle Technologies Associated with Improving Energy Efficiency or Reducing Brake- and Tire-wear Emissions (as Co-PI, CARB, \$200,000)
4. 03/2025 – 02/2026 CoNTrO-CEV: Coordinated Network Traffic Optimization with Connected and Electric Vehicles (CEVs) (as PI, Toyota Motor North America, \$60,000)
5. 01/2025 – 12/2025 Intersection Safety Challenge – Stage 1B (as PI, USDOT, \$166,666)
6. 03/2024 – 02/2025 Understanding Real-World Brake Activity: A Key to Assessing Non-Tailpipe Emission Sources for Sustainable Transportation and Communities (as PI, NCST, \$106,547)
7. 03/2024 – 02/2025 Promoting Internet of Mobility with Emerging Technologies (as Co-PI, Toyota Motor North America, \$60,000)
8. 03/2024 – 12/2024 Intersection Safety Challenge – Stage 1A (as PI, USDOT, \$100,000)
9. 12/2023 – 05/2025 Vulnerable Road User: Accurate and Reliable Detection (as PI, California Department of Transportation, \$150,000)
10. 10/2023 – 09/2024 Developing a Personalized Co-Pilot Framework Enabled by Parallel Intelligence (as PI, Toyota Motor North America, \$70,000)
11. 03/2023 – 02/2024 Cyber Mobility Mirror (CMM) Applications on UCR Innovation Corridor Testbed (as Co-PI, Toyota Motor North America, \$60,000)
12. 12/2022 – 05/2024 Developing a Framework for Analysis, Modeling, and Simulation (AMS) of Automated Trucks (as PI, Leidos/U.S. DOT, \$94,493)
13. 10/2022 – 09/2023 Enhancing Personalized Adaptive Cruise Control by Leveraging Driver Digital Twin (as PI, Toyota Motor North America, \$80,000)
14. 09/2022 – 05/2026 EcoCAR EV Challenge (as Co-PI, Department of Energy, \$1,141,766)
15. 07/2022 – 06/2023 Developing an Efficient Dispatching Strategy to Support Commercial Fleet Electrification (as PI, NCST UTC, \$90,000)
16. 04/2022 – 06/2023 Enhancing the Modeling of Emission Dispersion from Idling and Slowly Moving Vehicles (as PI, CARTEEH UTC, \$160,000)
17. 03/2022 – 02/2023 Upscaled Cyber Mobility Mirror System: Multi-intersection Camera-based Cooperative Perception (as Co-PI, Toyota Motor North America, \$60,000)



18. 10/2021 – 09/2022 Enhanced Personalized Advanced Driving Assistance System (E-PADAS) using the “Digital Twin” Approach (as PI, TMNA, \$80,000)
19. 09/2021 – 08/2022 Connectivity-Based Cooperative Ramp Merging in Multimodal and Mixed Traffic Environment (as PI, UTC Pacific Southwest Region, \$99,999)
20. 04/2021 – 06/2022 Lane-Level Localization and Map Matching for Advanced Connected and Automated Vehicle (CAV) Applications (as Co-PI, NCST, \$85,000)
21. 04/2021 – 06/2022 Develop a Performance Metric to Quantify the Inhalation of Traffic-related Air Pollutants at Both Mesoscale and Macroscale (as Co-PI, CARTEEH UTC, \$80,000)
22. 02/2021 – 06/2022 Quantifying the Environmental and Health Impacts of Curbside Management for Emerging Multi-modal Mobility Services (as PI, CARTEEH UTC, \$80,000)
23. 01/2021 – 04/2021 Connected Vehicle-based Advanced Detection of “Slow-Down” Events on Freeways (as PI, Honda Research Institute, \$44,079)
24. 12/2020 – 02/2022 Preliminary Evaluation of Roadside Sensing based Real-time Cyber Mobility Mirror (CMM) Prototype in Simulation (as Co-PI, Toyota Motor North America, \$80,000)
25. 10/2020 – 09/2021 Developing a Personalized ADAS for Mixed Traffic Scenarios by Leveraging the Digital Twin Framework (as PI, Toyota Motor North America, \$80,000)
26. 01/2020 – 06/2021 Estimating the Impacts of Automatic Emergency Braking (AEB) Technology on Traffic Energy and Emissions (as PI, UTC Pacific Southwest Region, \$99,995)
27. 10/2019 – 09/2020 Developing Situation Awareness Capability within the “Digital Twin” Framework – Activating/Deactivating Connected Vehicle (CV) Applications in Mixed Traffic (as PI, Toyota Motor North America, \$80,000)
28. 09/2019 – 12/2021 Assessing Roadway Infrastructure for Future Connected and Automated Vehicle Deployment in California (as PI, UC-ITS Program, \$89,920)
29. 04/2019 – 09/2021 Hybridization and Full Electrification Potential in Off-Road Applications (as Co-PI, California Air Resource Board, \$350,000)
30. 04/2019 – 09/2021 Real-World Tire and Brake Wear Emissions (as Co-PI, California Air Resource Board, \$400,000)
31. 02/2019 – 06/2021 Alternative HOV Lane Operational Strategies for Congestion Mitigation in California (as Co-PI, Caltrans, \$400,000)
32. 11/2018 – 10/2019 Evaluating Connected Vehicle Applications in a Mixed Traffic Environment using a “Digital Twin” Approach (as PI, Toyota Motor North America, \$49,999)
33. 11/2018 – 10/2019 Development of Eco-Friendly Ramp Control based on Connected and Automated Vehicle Technology (as PI, National Center for Sustainable Transportation, \$78,355)
34. 02/2018 – 01/2019 Quantifying Traffic Congestion-Induced Change of Near-road Air Pollutant Concentration (as Co-PI, CARTEEH UTC, \$80,000)
35. 01/2018 – 03/2018 Simulation Study on the Impact of Traffic Jam Assistance Application (as PI, Honda R&D America, \$41,720)
36. 10/2017 – 03/2020 Evaluating Energy Efficiency Opportunities from Connected and

- Automated Vehicle Deployments coupled with Shared Mobility in California (as co-PI and proposal writer, US DOE VTO, \$694,879)
37. 10/2017 – 09/2018 Deep Learning based Eco-driving system for Battery Electric Vehicles (as PI, National Center for Sustainable Transportation, \$70,000)
 38. 06/2017 – 12/2018 Development of Connected and Automated Vehicle Algorithms and Support at the FHWA's TFHRC (as PI, FHWA & Leidos, \$196,812)
 39. 04/2017 – 03/2020 An Innovative Vehicle-Powertrain Eco-Operation System for Efficient Plug-In Hybrid Electric Buses (as co-PI and proposal writer, US DOE ARPA-E, \$1,993,035)
 40. 03/2017 – 08/2018 California One: Connected Vehicle Pilot Deployment (CVPD) Support (as co-PI, Caltrans, \$150,000)
 41. 03/2017 – 02/2019 Traffic Optimization for Signalized Corridors Small Scale Test & Evaluation Project (as co-PI, FHWA & CAMP, ~\$340,000)
 42. 02/2017 – 01/2018 Connected and Automated Vehicle (CAV) Applications Effectiveness Analysis (as PI, Honda R&D America, \$277,008)
 43. 01/2017 – 12/2017 Developing an Interactive Machine Learning based Approach for Sidewalk Digitalization (as co-PI, National Center for Sustainable Transportation, ~\$80,000)
 44. 08/2016 – 07/2017 Evaluating ITS in terms of Safety, Mobility and Environmentally Sustainability (as co-PI, National Center for Sustainable Transportation, ~\$50,000)
 45. 08/2015 – 12/2016 Connected Cities Research Program (independent Consultant, \$10,000)
 46. 08/2015 – 07/2016 Eco-Approach and Eco-Departure Planning Study (as co-PI, National Center for Sustainable Transportation, \$40,000)
 47. 08/2015 – 09/2016 V2X Connected Vehicle Early Deployment Application Analysis (as co-PI, Honda R&D America, \$145,153)
 48. 07/2015 – 06/2017 Optimized Natural Gas Hybrid-Electric Drayage Truck Demonstration (as co-PI, Gas Technology Institute, \$419,317)
 49. 01/2015 – 12/2018 Evaluating Alternative Design of Geometric Configuration for High-Occupancy Vehicle (HOV) Facilities in California (as co-PI, Caltrans, ~\$400,000)
 50. 01/2015 – 12/2015 Agent-Based Adaptive Signal Control Using Connected Vehicle Technology (as PI, UC-CONNECT, \$118,237)
 51. 10/2014 – 12/2015 Fundamental Research in Freeway Lateral Maneuvers (as co-PI, Caltrans, \$150,000)
 52. 04/2014 – 01/2016 GlidePath Algorithm, Documentation, Evaluation and Integrity (as co-PI, FHWA & Leidos, \$216,297)
 53. 10/2013 – 09/2015 Advanced Energy Management Strategy Development for Plug-in Hybrid Electric Vehicles (as co-PI, UC-CONNECT UTC, \$100,000)
 54. 10/2012 – 12/2014 Assessment of Traffic Simulation Calibration for Micro-Scale Emissions Modeling (as co-PI, UC-CONNECT UTC, \$100,000)
 55. 10/2012 – 05/2014 Eco-Routing Navigation System for Electric Vehicles (as PI, California Energy Commission, \$94,714)
 56. 06/2012 – 05/2014 Deployment of Prior HOV Lanes Research Results in Developing Analysis Tools for New Managed Lanes Projects (as key researcher, Caltrans)



57. 05/2012 – 01/2015 Applications for the Environment: Real-Time Information Synthesis (AERIS) (as key researcher, US DOT)
58. 07/2010 – 01/2013 High Occupancy Vehicle (HOV) System Analysis Tools: District 8 HOV Facility Performance Analysis (as key researcher, Caltrans)
59. 01/2011 – 04/2012 Development and Evaluation of Intelligent Energy Management Strategies for Plug-in Hybrid Electric Vehicles (PHEV) (as key researcher, UC-CONNECT UTC)
60. 07/2011 – 08/2011 Improving Vehicle Fleet, Activity, and Emissions Data for On-Road Mobile Sources Emissions Inventories (as key researcher, California Air Resource Board)
61. 08/2010 – 09/2010 Congestion and Air Quality Evaluation of Goods Movement Pricing (as key researcher, Air Quality Management District)
62. 09/2009 – 06/2010 High Occupancy Vehicle (HOV) System Analysis Tools: Statewide HOV Facility Performance Analysis (as key researcher, Caltrans)
63. 06/2008 – 03/2010 Relieve Congestion and Conflicts Between Highway and Railroad at Grade-Crossing Intersections (Part II: Lab Testing and Field Testing) (as key researcher, SANDAG)
64. 04/2008 – 04/2009 Audi Clean Air (Traffic Network Simulation) (as key researcher, VW)
65. 03/2007 – 02/2009 SPRINTER Rail: Grade Crossing/Traffic Signal Optimization Study (as key researcher, SANDAG)
66. 12/2006 – 03/2007 Field Operational Tests of Adaptive Transit Signal Priority (ATSP) System (Transit Data Analysis and Communication Channel Capacity Simulation) (as key researcher, Caltrans)
67. 05/2005 – 12/2006 Relieve Congestion and Conflicts Between Highway and Railroad at Grade-Crossing Intersections (Part I: System Development, Simulation Study and Data Analysis) (as key researcher, SANDAG)
68. 05/2005 – 09/2006 Nationwide Air Traffic Management Using Aggregate Eulerian Flow Models (as key researcher, NASA)
69. 09/2003 – 07/2004 Simulation and Optimization of the Heating Network in Huhahaote, Inner Mongolia (as key researcher, Inner Mongolia Heating Company)

PROFESSIONAL ACTIVITIES

- Senior Member, Institute of Electrical and Electronics Engineers (IEEE) 2015 – present
- Member, National Academy of Inventors (NAI) 2023 – present
- Member, Standing Committee of AJE35 in Transportation Research Board (TRB) 2022 - 2025
- Member, Standing Committee of ACP30 in Transportation Research Board (TRB) 2016 – 2025
- Paper Review Coordinator, Standing Committee of ACP30 in Transportation Research Board (TRB) 2018 – 2021
- Member, SAE International (2021 – present)
- Member, ACM (2024 – present)
- Member, IEEE Intelligent Transportation Systems Society Technical Committee on Connected Energy-Efficient Mobility (2024 – present)
- Member, IEEE Control System Society Technical Committee on Smart Cities (2022 – present)
- Member, Chinese Overseas Transportation Association (COTA) (2012 – present)
- Member, Chinese Institute of Engineers (CIE) – SoCal Chapter (2016 – 2025)

- Member, Governing Board of VOICES by US Department of Transportation (2023 – 2024)
- Voting Member, SAE International Ground Vehicle Artificial Intelligence (2022 – present)
- Voting Member, SAE International On-Road Automated Driving Committee (2021 – present)
- Voting Member, SAE International Cooperative Driving Automation (CDA) Committee (2021 – present)
- Member, SAE International Shared and Digital Mobility Committee (2019 – 2022)
- Member, SAE MobilityRxiv® Advisory Board (2021 – present)
- Session Co-chair, Automated Road Transportation Symposium (2020, 2021, 2022)
- Reviewer for DOE VTO Annual Merit Review (2019 – present)
- Session Chair/Co-chair, IEEE Conference on Intelligent Transportation Systems (2017 – present)
- Session Chair/Co-chair, IEEE Intelligent Vehicle Symposium (2017 – present)
- Panelist, FHWA CARMA (2021 – 2024)
- Member, The First World Transport Convention Technical Committee 2017
- Panel member, Review group for FHWA's Urban Street ATDM project
- Member, Organization committee for 2017 TRB Annual Meeting ML Workshop
- Session Chair, IEEE International Conference on Connected Vehicle Expo (ICCVE) 2015
- Member, Intelligent Planet via Informatics and Cybernetics (IPIC) 2015 Program Committee
- Outreach Chair, Organizing committee for IEEE FISTS (2024), Riverside, CA
- Member, Organizing committee for ACM MobiSys 2025 Workshop on Advances in Environmental Sensing Systems for Smart Cities (Envsys'25) Workshop, 2025, Anaheim, CA
- Member, Organizing committee for the 2025 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2025).
- Member, Organizing committee for the ICCV 2025 DriveX workshop

SERVICE AS EDITOR/REVIEWER

Note: Not an exhaustive list of journals as a reviewer.

- **Associate Editor** for *IEEE Transactions on Intelligent Transportation Systems* (2021 – present)
- **Associate Editor** for *IEEE Open Journal of Intelligent Transportation Systems* (2019 – present)
- **Associate Editor** for *SAE International Journal of Connected and Automated Vehicles* (2017 – present)
- Associate Editor, IEEE Intelligent Vehicle Symposium (2020 – present)
- Associate Editor, IEEE Conference on Intelligent Transportation Systems (2018 – present)
- Guest Editor, *SAE International Journal of Electric Vehicles* - Special Issue on Eco-driving of Connected Electrified Vehicles in Intelligent Transportation Systems, February 2022
- Guest Editor, *SAE International Journal of CAVs* - Special Issue on Emerging Simulation Tools and Technologies for Testing and Evaluating Connected and Automated Vehicles, October 2021
- Guest Editor, *Journal of Advanced Transportation* - Special Issue on Partially Connected and Automated Traffic Operations in Road Transportation, June 2018
- *International Journal of Intelligent Transportation Systems Research* (2012 – present)
- *Journal of Intelligent Transportation Systems* (2012 – present)
- *Journal of Transportation Engineering* (2012 – present)
- *IEEE Transactions on Intelligent Transportation Systems* (2010 – present)
- *Transportation Research Board Annual Meeting* (2009 – present)
- *IEEE Intelligent Transportation Systems Conference* (2011 – present)
- *International Conference of Chinese Transportation Professionals* (2011 – present)



- *World Congress on Intelligent Transport Systems* (2008 – present)
- *2011 Intelligent Vehicles Symposium* (2011 – present)
- *2011 IEEE Forum on Integrated and Sustainable Transportation Systems* (2011)
- *The Open Transportation Journal* (2013 – present)
- *Transportmetrica A* (2014 – present)
- *Transportation Research: Part D* (2014 – present)
- *Transportation Research: Part B* (2014 – present)
- *Transportation Research: Part C* (2015 – present)
- *International Journal of Intelligent Transportation and Urban Planning (ITUP)* (2014 – present)
- *International Association of Chinese Geotechnical Engineers (IACGE) Annual Conference* (2015 – present)
- *Urban Rail Transit* (2015 – present)
- *Energies – Open Access Journal* (2015 – present)
- *Sensors – Open Access Journal* (2015 – present)
- *IEEE Transactions on Vehicular Technology* (2015 – present)
- *IEEE Transactions on Intelligent Vehicles* (2016 – present)
- *IEEE Transactions on Industrial Electronics* (2016 – present)
- *Transportation Letters* (2016 – present)
- *International Journal of Sustainable Transportation* (2016 – present)
- *Journal of Traffic and Transportation Engineering* (2016 – present)
- *IEEE Intelligent Transportation Systems Magazine* (2017 – present)
- *IEEE Transactions on Advances in Mechanical Engineering* (2017 – present)
- *Journal of Advanced Transportation* (2017 – present)
- *World Transport Convention* (2017 – present)
- *International Proposal Review* (2020 – present)

SERVICE AS THESIS COMMITTEE MEMBER

Note: With exception as a research faculty

- 12/2025 Xuanpeng Zhao’s PhD Thesis Defense, Co-chair (UCR)
- 08/2025 Saswat Nayak’s PhD Thesis Defense, Committee member (UCR)
- 12/2024 Chuheng Wei’s PhD Oral Exam, Co-chair (UCR)
- 06/2024 Mike Stas’s PhD Oral Exam, Committee member (UCR)
- 06/2024 Edison Li’s Master Thesis Defense, Co-Chair (UCR)
- 03/2024 Zhengwei Bai’s PhD Dissertation Defense, Co-Chair (UCR)
- 01/2024 Wang Hu’s PhD Dissertation Defense, Committee member (UCR)
- 07/2023 Jiahe Cao’s Master Thesis Defense, Chair (UCR)
- 05/2023 Xishun Liao’s PhD Dissertation Defense Co-Chair (UCR)
- 05/2023 Zhouqiao Zhao’s PhD Dissertation Defense, Co-Chair (UCR)
- 02/2023 Xuanpeng Zhao’s PhD Oral Exam, Co-chair (UCR)
- 09/2022 Saswat Nayak’s PhD Oral Exam, Committee member (UCR)
- 09/2022 Luis Enriquez-Contreras’s PhD Oral Exam, Committee member (UCR)
- 04/2022 Zhengwei Bai’s PhD Oral Exam, Co-Chair (UCR)
- 09/2021 Shangrui’s Master Thesis Defense, Chair (UCR)
- 03/2021 Xishun Liao’s PhD Oral Exam, Co-Chair (UCR)
- 09/2020 Yu Jiang’s Master Thesis Defense, Chair (UCR)

- 09/2020 Zhouqiao Zhao's PhD Oral Exam, Co-Chair (UCR)
- 08/2020 Fuad Noor 's PhD Oral Exam, Committee member (UCR)
- 02/2020 Chao Wang's PhD Dissertation Defense, Committee member (UCR)
- 11/2019 Nigel Williams' PhD Thesis Defense Co-Chair (UCR)
- 09/2019 Rumana Binte Faruque's PhD Oral Exam Committee (UCR)
- 05/2019 Ziran Wang's PhD Dissertation Defense Co-Chair (UCR)
- 11/2018 Danyang Tian's PhD Dissertation Defense Co-Chair (UCR)
- 10/2018 Sonya Ragothaman's Master Thesis Defense, Committee member (UCR)
- 2017 Nigel Williams's PhD Oral Exam, Committee member (UCR)
- 2016 Ziran Wang's PhD Oral Exam, Committee member (UCR)
- 2016 Kristoffer Mendoza's Master Thesis Defense, Committee member (CPP)
- 2016 Kevin Lu's Master Thesis Defense, Committee member (CPP)
- 2016 Chao Wang's PhD Oral Exam, Committee member (UCR)
- 2016 Xuewei Qi's PhD Dissertation Defense, Co-Chair (UCR)
- 2015 Qiu (Apple) Jin's PhD Dissertation Defense, Co-Chair (UCR)
- 2015 Fei Ye's PhD Oral Exam, Committee member (UCR)
- 2015 Danyang Tian's PhD Oral Exam, Committee member (UCR)
- 2014 Xuewei Qi's PhD Oral Exam, Committee member (UCR)

STUDENT/SCHOLAR SUPERVISION

- 2025 – Changxin Wan (PhD)
- 2024 – Will Snyder (PhD)
- 2024 – 2025 Aaron Luo (PhD)
- 2024 – Nilesh Ram Balusu (Master, PhD)
- 2024 – 2025 Daksh Patel (Master)
- 2023 – 2024 Mehul Lakra (Master, Female)
- 2023 – Edison Li (Master, PhD)
- 2023 – Ziyang Zhang (PhD)
- 2023 – 2025 Sameeha Tasneem (Master, Female)
- 2023 – 2024 Joy Mathew Gunasekar (Master)
- 2023/24 Summer Steven Li (Sophomore, Intern, UC San Diego)
- 2022 – 2023 Umapiya Sankaranainar Renganathan (Master, Female)
- 2022 – 2024 Ziyang Qin (Visiting PhD Student, Southwest Jiaotong University)
- 2022 – Chuheng Wei (PhD)
- 2022 – 2023 Dongbo Peng (PhD)
- 2020 – 2025 Xuanpeng (Shawn) Zhao (PhD)
- 2020 – 2024 Zhengwei (Michael) Bai (PhD)
- 2020 – 2023 Jiahe Cao (Master)
- 2019 – 2020 Dr. Lan Yang (Visiting Scholar, Chang'an University, Female)
- 2019 – 2023 Xishun (Heeson) Liao (PhD)
- 2019 – 2021 Shangrui Liu (Master)
- 2019 – 2022 Pingbo Ruan (Master)
- 2019 – 2020 Daniel Esaid (Senior)
- 2019 – 2020 Xiaofeng Zhang (Senior)
- 2019 – 2020 Runze Wang (Senior)



- 2019 – 2020 Zicheng Shan (Senior)
- 2019 – 2020 Boyu Hou (Senior, Female)
- 2018 – 2023 Zhouqiao Zhao (PhD)
- 2018 – 2021 Yu Jiang (Master)
- 2018 – 2019 Yu Wang (Master)
- 2018 – 2019 Yue You (Senior)
- 2017 Summer Tingxu Lv (Master, Intern, UC Davis, Female)
- 2015 – 2021 Nigel Williams (PhD)
- 2015 – 2019 Ziran (Ryan) Wang (PhD)
- 2015 – 2017 Weixia Li (Visiting Student, Tsinghua University, Female)
- 2015 – 2016 Kristoffer Mendoza (Master, CPP)
- 2015 – 2016 Kevin Lu (Master, CPP)
- 2015 – 2016 Bowen Yang (Master, CPP)
- 2015 Summer Raphaël Meudec (ENSTA ParisTech)
- 2015 Summer Swan Legrand
- 2014 – 2016 Peng Hao (Postdoc)
- 2014 – 2019 Fei Ye (PhD, Female)
- 2014 – 2019 Danyang Tian (PhD, Female)
- 2014 Summer Pierre Saikaly (Intern, ENSTA ParisTech)
- 2013 – 2017 Xuewei Qi (PhD)
- 2011 – 2015 Qiu Jin (PhD, Female)
- 2011 – 2015 Haitao Xia (PhD)

