YINHAI WANG, PH.D., P.E., DIST.M.ASCE, F.IEEE, F.ITE

Curriculum Vitae

Professor at Department of Civil and Environmental Engineering
Adjunct Professor at Department of Electrical and Computer Engineering
Professional Engineer (#56335) Registered in Washington State

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Seattle, WA 98195

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EDUCATION HISTORY

University of Tokyo, Tokyo, Japan
Ph.D. in Transportation Engineering
September 1998
Dissertation title: Modeling Vehicle-to-Vehicle Accident Risk Considering the Occurrence Mechanism at Four-Legged Signalized Intersections

University of Washington, Seattle, Washington
M.S. in Computer Science and Engineering
December 2002

Tsinghua University, Beijing, China
M.S.C.E. in Construction Engineering
June 1991

Tsinghua University, Beijing, China
B.S.C.E. in Structural Engineering
July 1989

EMPLOYMENT HISTORY

Washington State Transportation Center (TRAC), Seattle, WA, USA
Director, March 2024 -

Northwestern Tribal Technical Assistance Program Center funded by the US Department of Transportation (USDOT), Seattle, WA, USA
Director, Nov. 2022 –

Pacific Northwest Transportation Consortium, USDOT University Transportation Center for Federal Region 10, Seattle, WA, USA
Director, Jan. 2012 –

University of Washington, Seattle, WA, USA
Professor, Sept. 2011 –

University of Washington, Seattle, WA, USA
Associate Professor, Sept. 2007 – Aug. 2011

University of Washington, Seattle, WA, USA
Assistant Professor, Sept. 2003 – Aug. 2007

University of Washington, Seattle, WA, USA
Research Assistant Professor, Dec. 2002 – Sept. 2003

University of Washington, Seattle, WA, USA
Acting Assistant Professor, Aug. 2002 – Nov. 2002

University of Washington, Seattle, WA, USA
Research Associate, Jan. 2001 – July 2002

University of Washington, Seattle, WA, USA
Visiting Scientist, Oct. 1998 – Jan. 2001

University of Tokyo, Tokyo, Japan
Research Assistant, Oct. 1995 – Sept. 1998

Tsinghua University, Beijing, China
Assistant Professor, June 1991 – Sept. 1995

Hong Kong Wahey Inc., Beijing, China
Project Superintendent, Beijing New Century Hotel Decoration, April 1991 – Dec. 1991

AWARDS AND HONORS

2026 Outstanding Educator Award, Institute of Transportation Engineers (ITE) Western District, May 1, 2026.

2025 IEEE Intelligent Transportation Systems Outstanding Research Award, IEEE Intelligent Transportation Systems Society, Nov. 19, 2025.

Technology Lead of the Yakama Smart Project Team that received the 2025 Washington State Safe System Champion Award from Washington State Traffic Safety Commission, July 2025.

2nd Place Best Paper Award (2nd Place), AED30 Information Systems and Technology Committee, Transportation Research Board (TRB), Jan. 2025.

2024 Mentoring Award, Department of Civil and Environmental Engineering at the University of Washington: Yinhai Wang. June 2024.

Best Paper Award from the IEEE T-IV & IV 24 Joint Workshop on Foundation Intelligence for Intelligent Vehicles. June 2024.

2024 Asian American Engineer of the Year Award, Chinese Institute of Engineers, September 27, 2024.

Director of PacTrans that received the 2024 Technology Transfer Leadership Award, Council of University Transportation Centers (CUTC), January 2024.

Chair of the AI and Advanced Computing Applications Committee (AED50) that Received the 2024 Blue Ribbon Award in Leadership, Nov. 7, 2023, Transportation Research Board (TRB).

Member of Washington State Academy of Sciences, elected in September 2023.

PI of the Mobile Unit for Sensing Traffic (MUST) technology pilot project with Yakama Nation that received 2023 Innovative Project award of the USDOT's Build a Better Mousetrap Program, July 2023.

Thomas and Marilyn Nielson Endowed Funds in Engineering Professorship, April 2023 – March 2028, University of Washington.

Distinguished Member, American Society of Civil Engineers, Mar. 2023.

Francis C. Turner, American Society of Civil Engineers, Mar. 2023.

Best Paper Award, AED30 Information Systems and Technology Committee, Transportation Research Board (TRB), Jan. 2023

Fellow, Institute of Electrical and Electronics Engineers (IEEE), Jan. 2023.

Outstanding Paper Award, 2022 IEEE International Conference on Digital Twins and Parallel Intelligence (DTPI 2022), Oct. 2022.

PI of the WSDOT Truck Parking project that received the 2022 High Value Research Award from American Association of State Highway and Transportation Officials (AASHTO), Aug. 2022.

Outstanding Technical Paper Award, Institute of Transportation Engineers Western District, July 2022.

Outstanding Faculty Award, College of Engineering, University of Washington, June 2021.

Best Paper Award, IEEE International Smart Cities Conference, Oct. 2020.

Fellow, Institute of Transportation Engineers (ITE), Jan. 2020.

Fellow, American Society of Civil Engineers (ASCE), Dec. 2019.

Asian American Science and Engineering Innovation Award, Asian American Luminary Award (AALA) Committee, Sept. 15, 2019.

Transportation Education Council Innovations in Education Award, Institute of Transportation Engineers, Aug. 21, 2018.

Best Paper Award, CICTP 2016, July 9, 2016.

Cheung Kong Scholar Visiting Professor, Tsinghua University, Jan. 2015.

Beijing Scientific Research Award (Third Tier): Transit Smart Card Data Mining and Application Technologies. Dec. 2014.

Outstanding Leadership Award, Chinese Overseas Transportation Association (COTA), Aug. 2012.

Overseas Collaborative Research Award, National Natural Science Foundation of China, Jan. 2011 – Dec. 2012.

PTV AG Scientific Award 2009, Third Place (with Guohui Zhang, a PhD student of mine), Dynamic Tolling Simulation Using External Module, October 2009, PTV AG, Germany.

Thomas and Marilyn Nielson Endowed Funds in Engineering Professorship, November 2006 – October 2011, University of Washington.

Best Paper Award for 2003, Journal of Transportation Engineering, March 2004, American Society of Civil Engineers (ASCE).

Excellent Presentation Award, 51st Annual Conference of Japan Society of Civil Engineers, September 1996, Japan Society of Civil Engineers.

Japanese Government Scholarship, October 1995 – September 1998, Ministry of Science and Education, Japan.

Overseas Research Scholarship, April 1995, Department of Education and Employment, UK.

Distinguished Teaching Award for Young Faculty, January 1994, Tsinghua University, China.

Distinguished Teaching Award for Young Faculty, May 1993, Tsinghua University, China.

Outstanding College Graduates Award, August 1989, China Civil Engineering Society, China.

Excellent Student Medal, September 1988, Tsinghua University, China.

AFFILIATIONS AND OTHER APPOINTMENTS

Chair of AIWaysion, Inc. Board of Directors, Seattle, WA (2022 – present)
Director of International Advisory Committee, Transportation Engineering Program, Tsinghua University, China (2017 – 2020)
Visiting Director, Tongji University Center for Transportation Data Science, Shanghai, China (2016 – 2018)
Visiting Professor, School of Transportation Science and Engineering, Beihang University (2015-2018)
Visiting Professor, Business School, Sichuan University, China (2015-2018)
Visiting Department Chair, Traffic Information and Control Department, Harbin Institute of Technology, China. (2010 – 2016)

PROFESSIONAL SERVICES AND LEADERSHIP EXPERIENCE

Leadership roles at professional societies

President of Council of University Transportation Centers (CUTC), July 2025 – June 2026

Past Chair of the Center for Technical Advancement (CTA), ASCE, Oct. 2025 – Sept. 2026

Chair of the Committee on Technical Advancement (CTA), ASCE, Oct. 2024 – Sept. 2025

Vice Chair of CTA, ASCE, Oct. 2023 – Sept. 2024

Executive Committee Member of CTA, ASCE, Oct. 2020 – 2023

Elected governor on the Transportation & Development Institute (T&DI) Board, ASCE, Oct. 2016 – Sep. 2020

- 2016-2017, Treasure of T&DI
- 2017-2018, Vice president of T&DI
- 2018-2019, President of T&DI
- 2019-2020, Past President of T&DI

Member on the Transportation & Development Institute (T&DI) Board of Governors, ASCE, Oct. 2013 – Sep. 2015

Founding co-chair, Connected and Automated Vehicle Impact Committee, ASCE T&DI, Jan. 2017 – Dec. 2022

Chair of the Artificial Intelligence and Advanced Computing Committee (AED50), Transportation Research Board, 2021-2025.

Director of the CUTC Board, June 2019 – 2022

Secretary for the Executive Committee of CUTC, 2023 – 2024

Vice President for the Executive Committee of CUTC, 2024 - 2025

Chair of the Paper Award Review Committee, ASCE, Oct. 2022 – Sept. 2024

Board member for Chinese Overseas Transportation Association (COTA), 2007-2014

Vice President of COTA, 2008 – 2010.

President of COTA, 2010 – 2012.

Member on the IEEE Smart Cities Steering Committee, Sept. 2013 – 2018.

Member on the IEEE Intelligent Transportation Systems Society Board of Governors, June 2011 – May 2014.

Journal editorships

Co-Editor-in-Chief, AI for Transportation, Elsevier, 2025 – 2026

Connected and Automated Transportation Special Section Editor for ASCE Journal of Transportation Engineering, Part A: Systems. 2021 - present

Associate Editor for ASCE Journal of Transportation Engineering, Part A: Systems. 2011 - 2021

Associate Editor for Journal of Intelligent Transportation Systems, 2013-2024

Associate Editor for ASCE Journal of Computing in Civil Engineering, 2007-2017

Associate Editor for PLoS One, 2013-2015

Member of Editorial Board for Journal of Intelligent Transportation Systems, 2011-2013

Services for Conference Leaderships

Co-Chair, ASCE International Conference on Computing in Civil Engineering, July 19 – 22, 2027, Seattle, WA.

Chair, ASCE AI Roadmap Summit Advisory Committee, Aug. 31 – Sept. 1, 2026.

Co-Chair, AAA Safe Mobility Conference, March 30 – April 1, 2026, Seattle, WA.

Co-Chair, AI in Motion: Shaping the Future of Mobility and Safety Symposium, May 15-17, 2024, Austin, Texas.

Co-Chair, NSF AI in Transportation Workshop Phase II: Workforce Development, December 14, 2022, Gainesville, Florida.

Co-Chair, NSF AI in Transportation Workshop Phase I: Research, June 4-5 2022, Seattle, Washington.

Conference general co-Chair, the 2021 IEEE International Smart Cities Conference, Sept. 7-10, 2021, Virtual Conference.

Conference general co-Chair, the 2022 ASCE International Conference on Transportation and Development, May 2022, Seattle, Washington.

Conference Keynote Chair, the 2020 Virtual IEEE Smart Cities Conference, Sept. 2020.

Moderator for the 2020 ASCE V-Tech Conference's Resilience in Transportation and Development: Private Sector Panel. Sept. 17, 2020.

Conference general co-Chair, the 2020 ASCE International Conference on Transportation and Development, May 2020, Seattle, Washington.

Conference general co-Chair, the 2018 ASCE International Conference on Transportation and Development, July 2018, Pittsburgh, Pennsylvania.

Conference general co-Chair, the 2017 IEEE Smart Cities Conference, Sept. 2017, Wuxi, China.

Co-chair, ASCE T&DI Connected and Autonomous Vehicles Impact Committee, 2017 – present.

Conference publicity co-Chair, the 2016 IEEE Smart Cities Conference, September 2016, Trento, Italy.

Conference co-Chair, the 2015 IEEE Smart Cities Conference, October 2015, Guadalajara, Mexico.

Conference Chair, the 2014 COTA's International Conference for Transportation Professionals (CICTP), July 4-7, 2014, Changsha, China.

Program Co-Chair, the 15th International IEEE Conference on Intelligent Transportation Systems. Anchorage, Alaska, September 16-19, 2012.

Vice Conference Chair, the 2012 North America Travel Monitoring Exposition and Conference, Transportation Research Board, June 2012, Texas.

Conference Chair, the 15th Annual COTA/WCTA Technical Symposium on Sustainable Transportation and Development. Jan. 22, 2012. Washington D.C.

Conference Chair, the 2011 International Conference for Chinese Transportation Professionals (ICCTP), August 15-18, 2011, Nanjing, China.

Conference Chair, the 14th Annual COTA/WCTA Technical Symposium on Important Issues of Transportation Development in China, Jan. 23, 2011. Washington D.C.

Vice Conference Chair, the 2010 International Conference for Chinese Transportation Professionals (ICCTP), August 4-8, 2010, Beijing, China.

Publication Chair, the 2010 IEEE Symposium on Intelligent Vehicles, San Diego, California. June 21-25, 2010.

Executive Chair, the 2009 International Conference for Chinese Transportation Professionals (ICCTP), August 5-9, 2009, Harbin, China.

Executive Chair, the 11th Annual NACOTA/WCTA Technical Symposium on Important Issues of Transportation Development in China, Jan. 13, 2008. Washington D.C.

Publication Chair, the 10th International IEEE Conference on Intelligent Transportation Systems. Seattle, Washington. 2007.

Other professional services

Chair of the Committee on Torrens and Associate Editor Awards, ASCE, Oct. 2026 – present.

Member on the Committee on Torrens and Associate Editor Awards, ASCE, Oct. 2025 – Sept. 2026.

Member on the Award Candidate Development Committee, ASCE, Oct. 2024 – present.

Member on the Paper Award Review Committee, ASCE, Oct. 2021 – 2022

Licensed professional engineer in Washington (License number: 56335), 2018 – present

Member of Artificial Intelligence and Advanced Computing (ABJ70), Transportation Research Board, 2016-2021.

Member of Highway Capacity and Quality of Services Committee (AHB40), Transportation Research Board, 2010- 2019.

Research Subcommittee Chair for Highway Capacity and Quality of Services Committee (AHB40), Transportation Research Board, 2011- 2018.

Member of Freeway Operations Committee (AHB20), Transportation Research Board, 2007-2016.

Member of Transportation Information Systems and Technology Committee (ABJ50), Transportation Research Board, 2010-2019.

Member of the Advanced Technology Committee, Transportation & Development Institute, American Society of Civil Engineers, 2008-2018.

Session Chair for WA3: Simulation and Modeling 3 at the 13th International IEEE Conference on Intelligent Transportation Systems, Madeira Island, Portugal. September 19-22, 2010.

Session chair for Session 553, Performance Analysis of Lanes Managed with Variable Tolls, 2010, at the 89th Annual Meeting of Transportation Research Board. Jan. 12, 2010. Washington D.C.

Chair of the Pacific-Rim Board of Advisors, Second International Symposium on Freeway and Tollway Operations, June 21-12, 2009, Honolulu, Hawaii.

Advisory Committee Chair, the 12th Annual NACOTA/WCTA Technical Symposium on Important Issues of Transportation Development in China, Jan. 11, 2009. Washington D.C.

Chair of the Plenary Session 4: The State of the Art in Traffic Operations, Second International Symposium on Freeway and Tollway Operations Conference, Honolulu, Hawaii, June 2009.

Member of the Best Paper Selection Committee, Journal of Computing in Civil Engineering, July 2007 – present.

Session chair for Session 5 in Track 5: Meeting Demand Through Variable Pricing, 2008 Freeway and Tollway Operations Conference, Fort Lauderdale, Florida, June 2008.

Session chair for Session 318, Freeway Operations 2006, at the 85th Annual Meeting of Transportation Research Board. Jan. 23, 2006. Washington D.C.

Member of International Program Committee, The First International Conference on Transportation Logistics, July 27-29, 2005, Singapore.

Member of ITE Washington Board, 2004 – present.

Member of ITE Traffic Engineering Council Executive Committee, 2004 – present.

Session chair for Applications of Informatics and Cybernetics in Science and Engineering I, the 2004 Conference of Systemics, Cybernetics, and Informatics. July 19, 2004. Orlando, FL.

Session chair for Session D6-01, Enroute Driver Behavior: Issues and Methods, at the 9th World Conference on Transport Research. July 24, 2001. Seoul, Korea

International, national or governmental service

Planning Committee member for the 8th EU-US Transportation Research Forum (2024-present)
State Transportation Innovation Council, USDOT, 2016 - present
Member of Washington State Autonomous Vehicle Executive Committee, 2019 – 2025
External Project Review Panel for Federal Highway Administration's Use of Real Time Operations Strategies and Data for Proactive Safety Intervention (2023-2025)
Federal Highway Administration Mobility Trend and Demand Forecasting Peer Review Expert Panel (2022-2025)
NSF Career Proposal Panel (2021)
Chair of Canada Foundation for Innovation Panel (2020)
Canada Foundation for Innovation Panel (2016)
NSF Proposal Review Panel (2019)
NSF Proposal Review Panel (2006)
NSF Proposal Review Panel (2005)
Paper Reviewer for AHB20 – Freeway Operations, TRB (2000 – present)
Paper Reviewer for AHB45 – Traffic Flow Theory, TRB (2009 – present)
Paper Reviewer for AHB15 – Intelligent Transportation Systems, TRB (2009 – present)
Paper Reviewer for ABJ50 – Information Systems and Technology, TRB (2003 – present)
Paper Reviewer for ABJ90 – Freight Transportation Data, TRB (2009 – present)
Paper Reviewer for AHB25 – Traffic Signal Systems Committee, TRB (2004 – present)
Proposal/Report Reviewer for TransNow (2002 – 2011)

PUBLICATIONS

(Authors marked with * are my current or previous graduate or undergraduate students)

Refereed archival journal publications

Published:

1. Chen, Kehua, Ryan Feng Lin, Shucheng Zhang*, and Yinhai Wang. "Deep Fictitious Play-Based Potential Differential Games for Learning Human-Like Interaction at Unsignalized Intersections." *IEEE Transactions on Intelligent Transportation Systems*, January 2026. https://doi.org/10.1109/TITS.2026.3723796
2. Zhang*, Shucheng, Yan Shi*, Bingzhang Wang*, Yuang Zhang*, Muhammad Monjurul Karim, Kehua Chen, Chenxi Liu*, Mehrdad Nasri*, and Yinhai Wang. "From Camera-Based Sensing to Reasoning: A Comprehensive Review Toward Proactive Vulnerable Road User Safety." *IEEE Transactions on Intelligent Transportation Systems*, 1–17, January 2026. https://doi.org/10.1109/TITS.2026.3707876
3. Dai, Bingyou, Xuesong Wang, Fengchun Yang, Yuxiang Feng, Yinhai Wang, and Mohammed Quddus. "Leveraging large language models for crash causation chain inference with in-depth accident investigation data." *Transportation Research Part C: Emerging Technologies* 191, 105820, October 2026. https://doi.org/10.1016/j.trc.2026.105820
4. Zhang*, Shucheng, Chenxi Liu*, Nutvara Jantarathaneewat*, and Yinhai Wang. "ATSDAS: A Vision-Based System for Automated Traffic Sign Management and Condition Assessment." *IEEE Transactions on Intelligent Transportation Systems* 27, no. 8, 9317-9328, August 2026. https://doi.org/10.1109/TITS.2026.3683626
5. Jantarathaneewat*, Nutvara, Chenxi Liu*, Shucheng Zhang*, and Yinhai Wang. "Enhancing Deep Learning-Based Segmentation for Obstructive Roadside Element Detection in Point Cloud Data from Mobile Laser Scanning in Rural Road Environments." *Journal of Transportation Engineering, Part A: Systems* 152, no. 8, 04026060, August 2026. https://doi.org/10.1061/JTEPBS.TEENG-9479
6. Nasri*, Mehrdad, Jingyi He*, Muhammad Monjurul Karim, Shucheng Zhang*, and Yinhai Wang. "Can surrogate safety measures explain crash patterns at signalized intersections? Evidence from network-wide connected-vehicle data using negative binomial, random forest, and diffusion GNN models." *Journal of Safety Research* 97, 553-564, June 2026. https://doi.org/10.1016/j.jsr.2026.04.008
7. Nasri*, Mehrdad, Shuyi Yin*, Yinhai Wang, and Venky Shankar. "Leveraging image semantic segmentation for road infrastructure localization in traffic safety applications." *Transportation Research Record: Journal of the Transportation Research Board* 2680, no. 4 (2025). https://doi.org/10.1177/03611981251372093
8. Zhuang*, Yifan, Pei Liu, Hao Yang*, Kai Zhang, Yinhai Wang, and Ziyuan Pu. "Few-shot learning for novel object detection in autonomous driving." *Communications in Transportation Research* 5 (2025): 100194. https://doi.org/10.1016/j.commtr.2025.100194.
9. Liu, Chunsheng, Baoqi Xue, Shuang Li, Faliang Chang, Ruidong Li, Nanjun Li, and Yinhai Wang. "UAV-Based Vehicle Re-Identification via Counterfactual Attention Learning and Hard-Sensitive Binomial Joint Promotion." *IEEE Transactions on Intelligent Transportation Systems* (2025). https://doi.org/10.1109/TITS.2025.3615929.
10. Ren, Yilong, Yizhuo Chang, Zhiyong Cui, Xiao Chang, Haiyang Yu, Xiaosong Li, and Yinhai Wang. "Is cooperative always better? Multi-Agent Reinforcement Learning with explicit

neighborhood backtracking for network-wide traffic signal control." *Transportation Research Part C: Emerging Technologies* 179 (2025): 105265. https://doi.org/10.1016/j.trc.2025.105265.

11. Ricord*, Samuel, Angela Kitali, and Yinhai Wang. "Toll Programs and Tolling Equity in the USA: Current Best Practices." *Journal of Transportation Engineering, Part A: Systems* 151, no. 9 (2025): 03125002. https://doi.org/10.1061/JTEPBS.TEENG-8760.
12. Karim, Muhammad Monjurul, Bingzhang Wang*, and Yinhai Wang. "Thermal forecast: Traffic trajectory prediction in challenging nighttime conditions using thermal imaging." *Transportation Research Record* 2679, no. 7 (2025): 746-755. https://doi.org/10.1177/03611981251328979.
13. Wang, Xiaofei, Jiamin Chen, Xinwei Li, Qiang Zeng, and Yinhai Wang. "Modeling the Safety Performance of Freeway Horizontal and Crest Vertical Curve Combinations Using Hierarchical Negative Binomial Approaches with Temporal Correlation." *Transportation Research Record* 2679, no. 7 (2025): 174-184. https://doi.org/10.1177/03611981251324205.
14. Karim, Muhammad Monjurul, Yan Shi*, Shucheng Zhang*, Bingzhang Wang*, Mehrdad Nasri*, and Yinhai Wang. "Large Language Models and Their Applications in Roadway Safety and Mobility Enhancement: A Comprehensive Review." *Artificial Intelligence for Transportation*. Vol. 1, 100004, July 2025. https://doi.org/10.1016/j.ait.2025.100004.
15. Ren, Yining, Yinhai Wang, Zhizhou Wu, Constantinos Antoniou, and Yunyi Liang. "Road Side Unit Location Optimization Considering Communication Channel Competition and 6G Technology." IEEE Transactions on Intelligent Transportation Systems (2025). https://doi.org/10.1109/TITS.2025.3572183.
16. Lu, Hongliang, Meixin Zhu*, Chao Lu, Shuo Feng, Xuesong Wang, Yinhai Wang, and Hai Yang. "Empowering safer socially sensitive autonomous vehicles using human-plausible cognitive encoding." Proceedings of the National Academy of Sciences 122, no. 21 (2025): e2401626122. https://doi.org/10.1073/pnas.2401626122.
17. Chen, Xianda, Xu Han, Meixin Zhu*, Xiaowen Chu, PakHin Tiu, Xinhu Zheng, and Yinhai Wang. "EditFollower: Tunable car following models for customizable driving behavior." *IEEE Transactions on Intelligent Transportation Systems* (2025). https://doi.org/10.1109/TITS.2025.3567710.
18. Liu, Chunsheng, Jincan Xie, Faliang Chang, Tuo Li, Shuang Li, and Yinhai Wang. "End-Point Drive and Reverse Enhanced Decoding-Based Traffic Participants Trajectory Prediction Under Bird's Eye View." *IEEE Transactions on Intelligent Transportation Systems* (2025). https://doi.org/10.1109/TITS.2025.3554714.
19. Liu*, Chenxi, Nutvara Jantarathaneewat*, Shucheng Zhang*, Hao Yang*, Xin Fu, and Yinhai Wang. "Advancing Automatic Asset Management: An Edge-Based US-Specific Traffic Sign Detection and Recognition System Based on Image Processing." *Journal of Transportation Engineering, Part A: Systems*. Vol. 151, No. 3, 2025. https://doi.org/10.1061/JTEPBS.TEENG-84.
20. Li, Yiqun, Ziyuan Pu*, Pei Liu, Tao Qian, Qinran Hu, Junyi Zhang, and Yinhai Wang. "Efficient Predictive Control Strategy for Mitigating the Overlap of EV Charging Demand and Residential Load based on Distributed Renewable Energy." *Renewable Energy*, Vol. 240, 122154. Feb. 2025. https://doi.org/10.1016/j.renene.2024.122154.
21. Fan, Shuying, Kai Lu, Yinhai Wang, Xin Tian, and Minxue Zhang. "Action Masking-Based Proximal Policy Optimization With the Dual-Ring Phase Structure for Adaptive Traffic Signal Control." *IEEE Transactions on Intelligent Transportation Systems*. Vol. 26(2), 2422-2433. Feb. 2025. https://doi.org/10.1109/TITS.2024.3510379.
22. Chen, Xianda, Kehua Chen, Meixin Zhu*, Xuesong Wang, Yinhai Wang, and Hao Yang. "MetaFollower: Adaptable Personalized Autonomous Car Following." *Transportation Research Part C: Emerging Technologies*. Vol. 169, December 2024, 104872, 2024. https://doi.org/10.1016/j.trc.2024.104872.

23. Liu, Dan, Ziyuan Pu, Yinhai Wang, Tom Van Woensel, and Evangelos I. Kaisar. "New Spatial Analysis and Hybrid Heuristics Enhance Truck Freight Tonnage Estimation Based on Weigh-in-Motion Data." IEEE Transactions on Intelligent Transportation Systems 25, no. 12 (2024): 19581-19591. https://doi.org/10.1109/TITS.2024.3453268
24. Pu, Chenlu, Chenxi Liu*, Yinhai Wang, and Lili Du. "Frontiers of Emerging AI Technologies Best Practices and Workforce Development in Transportation: NSF AI–Transportation Workshop Phase II." Journal of Transportation Engineering, Part A: Systems. Vol. 150, No. 9, 2024. https://doi.org/10.1061/JTEPBS.TEENG-8441.
25. Pu, Chenlu, Chenxi Liu*, Lili Du, and Yinhai Wang. "Potentials and Challenges of AI-Empowered Solutions to Urban Transportation Infrastructure Systems: NSF AI-Transportation Workshop Phase I." Journal of Transportation Engineering, Part A: Systems. Vol. 150, No. 9, 2024. https://doi.org/10.1061/JTEPBS.TEENG-8538
26. Karim, Muhammad Monjurul, Ruwen Qin, and Yinhai Wang. "Fusion-GRU: A Deep Learning Model for Future Bounding Box Prediction of Traffic Agents in Risky Driving Videos." *Transportation Research Record*. Vol. 2678, Iss. 9, 699-709. https://doi.org/10.1177/03611981241230540.
27. Wang, Pengqin, Meixin Zhu*, Xinhu Zheng, Hongliang Lu, Hui Zhong, Xianda Chen, Shaojie Shen, Xuesong Wang, Yinhai Wang, and Fei-Yue Wang. "Bevgpt: Generative pre-trained foundation model for autonomous driving prediction, decision-making, and planning." *IEEE Transactions on Intelligent Vehicles* (2024). https://doi.org/10.1109/TIV.2024.3449278.
28. Lan, Zhengxing, Yilong Ren, Haiyang Yu, Lingshan Liu, Zhenning Li, Yinhai Wang, and Zhiyong Cui*. "Hi-SCL: Fighting long-tailed challenges in trajectory prediction with hierarchical wave-semantic contrastive learning." *Transportation Research Part C: Emerging Technologies*, Vol. 165, 2024, 104735, August 2024. https://doi.org/10.1016/j.trc.2024.104735.
29. Zhuang*, Yifan, Talha Azfar, Yinhai Wang, Wei Sun, Xiaokun Wang, Qianwen Guo, and Ruimin Ke*. "Quantum Computing in Intelligent Transportation Systems: A Survey." *CHAIN*, Vol. 1, Iss. 2, 138-149. 2024. https://doi.org/10.23919/CHAIN.2024.000007.
30. Liu*, Chenglong, Ziyuan Pu*, Yishun Li, Ying Jiang, Yinhai Wang, and Yuchuan Du. "Enabling Edge Computing Ability in View-Independent Vehicle Model Recognition." *International Journal of Transportation Science and Technology*, Vol. 14, 73-86, 2024. https://doi.org/10.1016/j.ijtst.2023.03.007.
31. Chen, Xianda, Xianyi Yuan, Meixin Zhu*, Xinhu Zheng, Xuesong Wang, Yinhai Wang, and Fei-Yue Wang. "AggFollower: Aggressiveness Informed Car-Following Modeling." *IEEE Transactions on Intelligent Vehicles*. Aug. 2024. https://doi.org/10.1109/TIV.2024.3449278.
32. Lu, Kai, Guanghui Xu, Xiaofeng Xie, Jianmin Xu, and Yinhai Wang. "A Synchronization-constraints-based Dual Bands Method of Traffic Signal Optimization." *Transportmetrica A: Transport Science, 1–20*, 2024. https://doi.org/10.1080/23249935.2024.2332965.
33. Li, Zhenning, Zhiyong Cui, Haicheng Liao, John Ash, Guohui Zhang, Chengzhong Xu, and Yinhai Wang. "Steering the future: Redefining intelligent transportation systems with foundation models." Chain 1, no. 1 (2024): 46-53. https://doi.org/10.23919/CHAIN.2024.100003
34. Chen, Di, Meixin Zhu*, Hao Yang*, Xuesong Wang, and Yinhai Wang. "Data-driven Traffic Simulation: A Comprehensive Review." *IEEE Transactions on Intelligent Vehicles*, Vol. 25(6), 5389-5401. June 2024. https://doi.org/10.1109/TIV.2024.3367919.
35. Xu, Lipeng, Zhizhou Wu, Yinhai Wang, Jinjun Tang, and Yunyi Liang*. "Compressing Vehicle Trajectory Data Using Hybrid Coding with Kinematic Motion Prediction." *IEEE Transactions on Intelligent Transportation Systems*, In Press. https://doi.org/10.1109/TITS.2024.3355744.
36. Lu, Hongliang, Yupei Liu, Meixin Zhu*, Chao Lu, Hai Yang, and Yinhai Wang. "Enhancing Interpretability of Autonomous Driving Via Human-Like Cognitive Maps: A Case Study on Lane

Change." *IEEE Transactions on Intelligent Vehicles*, Vol. 9(9), 5739-5749. Sept. 2024. https://doi.org/10.1109/TIV.2024.3359281.

37. Liu, Chunsheng, Xiao Zhang, Faliang Chang, Shuang Li, Penghui Hao, Yansha Lu, and Yinhai Wang. "Traffic Scenario Understanding and Video Captioning via Guidance Attention Captioning Network." *IEEE Transactions on Intelligent Transportation Systems*. Vol. 25 (5), 3615-3627. May 2024. https://doi.org/10.1109/TITS.2023.3323085.
38. Ricord, Samuel* and Yinhai Wang. "Investigation of Equity Biases in Transportation Data: A Literature Review Synthesis." Journal of Transportation Engineering, Part A: Systems, Vol. 149, No. 11, 2024. https://doi.org/10.1061/JTEPBS.TEENG-77.
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Non-refereed papers:

1. Wang, Yinhai and Mehrdad Nasri. "Leveraging AI and Big Data to Enhance Safety Analysis." *TR News, Issue 357* (Spring 2026).
2. Wang, Bo, David Reinke, and Yinhai Wang. "Artificial Intelligence Frontiers in Transportation." *TR News*, January-March 2024.
3. Williges, Chris, Mohammed Hadi, Mike Sobolewski, Yinhai Wang, and John Nisbet. "Piloting Reliability Research." *TR News*, November-December 2013.

4. Koji, Saito, Yinhai Wang, Kiyoshi Takahashi, and Hitoshi Ieda. "A Study on Intersection Angle Accident Risk with Drivers' PRT Considered." *Proceedings of the 53rd annual conference of the Japan Society of Civil Engineers* (in Japanese), No. 4, 476-477, 1998.
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6. Wang, Yinhai, Hitoshi Ieda, and Hironori Kato. "Traffic Safety under Mixed Traffic Condition in Beijing." *Proceedings of the 51st annual conference of the Japan Society of Civil Engineers*, No. 4, 314-315, 1996.

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2. Wang, Yinhai, Nutvara Jantarathaneewat, and Kehua Chen. "Truck Parking Information and Management System (TPIMS)". Final Report for WSDOT, WA-RD956.1. Dec 2025.
3. Wang, Yinhai, Shucheng Zhang, et al. "An Innovative Internet of Things (IoT) Technologies for Active Transportation Sensing and I2X Applications." STIC Incentive Project Report for Washington State Department of Transportation. Dec 2025.
4. Wang, Yinhai, Haifang Wen, and Lingzi Wu. "2025 PacTrans-WSDOT Washington Summer High School Transportation Camp Program Report." Final Report for WSDOT. Oct. 2025.
5. Wang, Yinhai, Edward McCormack, Yifan Ling, and Sruangsaeng Chaikasetsin. "Smart Sensor for Snow Avalanche Monitoring Phase2". Final Report for WSDOT. Sep 2025.
6. Mehrdad Nasri, Muhammad Karim, Ryan P. Avery, Yinhai Wang. "Pathways for Civil Engineering and Land Surveying Workforce Development in Washington State". Final report for PacTrans Engineering Pathways and Workforce Development project, Prepared for The Washington State Legislature Joint Transportation Committee. July 2025.
7. Wang, Yinhai, Shuyi Yin, Mehrdad Nasri, Chenxi Liu, Shucheng Zhang, Venky Shankar, Brian Chandler, Fred Mannering, Janet Gates, and Joey Cai. "Leveraging Artificial Intelligence and Big Data to Enhance Safety Analysis." NCHRP Research Report 1152 for NCHRP 17-100. May 2025. https://nap.nationalacademies.org/read/29098/chapter/1.
8. Wang, Yinhai, Shuyi Yin, Mehrdad Nasri, Chenxi Liu, Shucheng Zhang, Venky Shankar, Brian Chandler, Fred Mannering, Janet Gates, and Joey Cai. "Leveraging Artificial Intelligence and Big Data to Enhance Safety Analysis." Final Conduct of Research Report for NCHRP 17-100. May 2025. https://nap.nationalacademies.org/resource/29098/NCHRPRep1152_Conduct_of_Research_Report.pdf.
9. Wang, Yinhai, Shucheng Zhang, Chenxi Liu, and Nutvara Jantarathaneewat. "Automated Traffic Sign Recognition Using Computer Vision and Deep Learning." Technical Report for WSDOT, WA-RD 946.1, March 2025
10. Wang, Yinhai, Lingzi Wu, Haifang Wen, Haifeng Wang, and Jia Cheng. *2024 PacTrans-WSDOT Summer High School Transportation Camp Program Report*. Final Report for WSDOT. Nov. 2024.
11. Wang, Yinhai, Wei Sun, Sam Ricord, Cesar Maia de Maia de Souza, Yifan Ling, Yan Shi, Bingzhang Wang, and Mehrdad Nasri. "Comprehensive Transportation Equity Analysis for RITI Community: A Data-Driven Approach with Case Study." Final Project Report for Center for Safety Equity in Transportation (CSET). July 2024. https://rosap.ntl.bts.gov/view/dot/76520.
12. Wang, Yinhai, Wei Sun, Sam Ricord, Cesar Maia de Maia de Souza, Yifan Ling, Yan Shi, Bingzhang Wang, and Mehrdad Nasri. "Cost-Effective System for Rural Roadway Traffic, Surface Conditions

and Weather Conditions Monitoring." Final Project Report for Center for Safety Equity in Transportation (CSET). June 2024. https://rosap.ntl.bts.gov/view/dot/76535.

13. Wang, Yinhai, Jia Li, Lingzi Wu, and Anne Moudon. *2023 PacTrans-WSDOT Summer High School Transportation Camp Program Report*. Final Report for WSDOT. September 2023.
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15. Schroeder, Bastian J., Burak Cesme, Zifeng Lilian Wu, Azhagan Azy Avr, Paul Ryus, Nagui M. Rouphail, Yinhai Wang, Shuyi Yin, and Wei Sun. Traffic Modeling Document. No. NCHRP Project 07-26. 2023. https://dx.doi.org/10.17226/27048.
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75. Wang, Yinhai, Guohui Zhang, Jonathan Corey, and Cyrus Shahrivar. *Side-by-side Evaluation of VVDC and Citilog's Media TD Video Detection Systems*. Research Report for Washington State Department of Transportation, Agreement T4118, Aug. 2007.
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80. Nihan, Nancy L., Yinhai Wang, and Xiaoping Zhang. *Improved Dual-Loop Detection System for Collecting Real-Time Truck Data*. Transportation Northwest (TransNow) Research Report TNW2005-02. Feb. 2005.
81. Zhang, Xiaoping, Nancy L. Nihan, and Yinhai Wang. *Evaluation of Dual-Loop Data Accuracy Using Video Ground Truth Data: Dual Loop Error*. Washington State Department of Transportation Research Report. WA-RD 535.1/TNW 2002-02. Jan. 2002.
82. Wang, Zuoyuan, Yinhai Wang, Zhenxiang Ye and Dongming Chen. *An investigation on infrastructure damage caused by 1991's food in Anhui Province*. Research report for the China Science Foundation (in Chinese), May 1995.

Other significant research dissemination (web sites, software, Wikis, etc.)

1. Shi, Yan, Chenxi Liu, Kehua Chen, and Yinhai Wang. "Edge-based Vehicle Detection and Classification System." Coded in Python. 2026.
2. Zhang, Shucheng and Yinhai Wang. "Traffic Sign Detection and Recognition Using Computer Vision and Machine Learning." Coded in Python. 2025.
3. Wang, Bingzhang, Muhammad Monjurul Karim, and Yinhai Wang. "STAR-GPT System." Coded in Python with ChatGPT API. 2024.

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6. Yinsong Wang and Yinhai Wang. "Elevation Data Extraction from Google Earth," coded in Java, 2014.
7. Jonathan Corey, Kristian Henrickson, and Yinhai Wang. "STAR Lab Toolkit for Analysis of Traffic and Intersection Control Systems (STATICS)", Coded in VBA in Excel, 2013.
8. Xiaofeng Chen, Kris Henrickson, and Yinhai Wang, "Kinect-based Pedestrian Detection System", coded in C, 2013.
9. Xiaolei Ma, Sonia Xiao, and Yinhai Wang, "Digital Roadway Interactive Visualization and Evaluation Network (DRIVE Net) Version 3.0", Coded in Java, 2012.
10. Xiaolei Ma, Jonathan Corey, and Yinhai Wang, "Regional Map-based Data Retrieval Tool for Federal Highway Administration", Coded in Java, 2012.
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12. Yegor Malinovskiy, Yao-Jan Wu, Yunteng Lao, and Yinhai Wang, "Media Access Address Based Traffic Data Collection System", Coded in Python, 2008.
13. Patikhom Cheevarunothai and Yinhai Wang, "Advanced Roadway Incident Analyzer (ARIA)", Coded in C#, 2008.
14. Yao-Jan Wu and Yinhai Wang, "Google-Map Based Traffic Information System", developed using a set of open source technologies and C#, 2007.
15. Yegor Malinovskiy, Jianyang Zheng, and Yinhai Wang, "Video-Based Pedestrian Tracking System", coded in C# and C++, 2006.
16. Ryan Avery and Yinhai Wang, "A Length-Based Vehicle Classification System Using Uncalibrated Video Images", coded in C#, 2005.
17. Jianyang Zheng and Yinhai Wang, "Mode-Based Background Extraction", coded in C#, 2005.
18. Patikhom Cheevarunothai and Yinhai Wang, "Advanced Loop Event Data Analyzer (ALEDA)", Coded in C#, 2005.
19. Patikhom Cheevarunothai and Yinhai Wang, "LOOP detector SIMulator (LOOPSIM)", coded in C#, 2004.
20. Jianyang Zheng and Yinhai Wang, "Cycle Failure Detection System", coded in C#, 2004.
21. Yinhai Wang, "Content-Based Image Retrieval System", coded in Visual C++, 2003.
22. Yinhai Wang, "Single-Loop Event Data Based Vehicle Classifier", coded in C#, 2003.
23. Yinhai Wang, "Real-Time Traffic Information System", coded in C# and C++, 2002.
24. Yinhai Wang and TransNow ITS Group, "Real-Time Loop Detector Data Pump", coded in C#, 2002.
25. Yinhai Wang and TransNow ITS Group, "Detector Event DAta Collection (DEDAC) System", coded in C, 2002.
26. Yinhai Wang and Qasim Zuhair, "Travel Reservation System", coded in Java, 2001.
27. Yinhai Wang, "Virtual Dual-Loop Detector", coded in Visual C++, 2001.
28. Yinhai Wang, "Duck Show", a computer animation cartoon coded in C using Open GL, 2000.
29. Yinhai Wang, "Traffic Accident Data Management System", coded in Java, 2000.

MISCELLANEOUS

Outside Professional Work for Compensation (1460s)

1. List all outside professional work at organizations, companies, industry and/or consulting.
2. Include information in the table below:

Name of Organization	Start Date	End Date	Number of Days	Description of Activity
AIWaysion, Inc.	May 1, 2022	April 30, 2027	20	Chair of the board for AIWaysion

OTHER SCHOLARLY ACTIVITY

Invited lectures and seminars.

1. WASHTO TSMO Peer Exchange. "PacTrans Workforce Development Program." Sept. 30, 2026. Sioux Fall, SD.
2. 2026-2027 ITE Washington Kick-off Meeting Keynote Speech. "Advances in AI Technology and Potential Applications in Transportation." Sept. 15, 2026. Seattle, WA.
3. 2026 TxDOT TRF/MNT Conference. "Agentic Edge AI: The Next Generation of Roadway Detection for Intelligent Infrastructure Systems." Sept. 10, 2026. Dallas, TX.
4. Enabling AI and Machine Learning to Address Transportation Challenges Webinar. "Agentic Edge AI: A Foundation for Next-Generation Transportation Intelligence and Digital Infrastructure." June 11, 2026.
5. ITS America Conference & Expo 2026 City of Bellevue SMART Grant: Real Time Traffic Signal Safety Interventions Session. "Technologies for Sensing Active Users at Urban Intersections." June 9, 2026. Detroit, Michigan.
6. AI Futures: Transportation Deep Dive online Forum. "Current AI Issues and Usage in Transportation." June 8, 2026.
7. 2026 Safe Mobility Conference Opening Session. "Opening Remarks." March 31, 2026. Seattle, Washington.
8. Building Capacity for Rural Agencies Workshop at the 2026 Safe Mobility Conference. "The Workforce Crisis — Challenges, Gaps & Data." March 30, 2026. Seattle, Washington.
9. Washington State University Civil and Environmental Engineering Seminar. "Modernizing Transportation Infrastructure with Edge Computing and Customized AI." March 23, 2026. Pullman, WA.
10. University of Washington Steve and Sylvia Burges Endowed Lecture. "Enabling Smart Infrastructure with Edge Computing and Customized Artificial Intelligence." March 12, 2026. Seattle, WA.
11. Columbia University Smart Cities Center. "Edge AI in Motion: Transforming Roads into Safer, Smarter, and More Community-Centered Mobility Systems." Feb. 17, 2026. New York City.

12. Washington State Association of County Engineers Professional Development Conference. "Overview of AI Technologies and Potential Applications." Feb. 11, 2026. Leavenworth, WA.
13. Session 3088: Piloting AI in Transportation: Cross-Sector Lessons and Strategies at the 2026 TRB Annual Meeting. "Vehicle Re-Identification on Road Networks Using Edge-Based AI Technologies." Jan. 13, 2026. Washington, DC.
14. American Council of Engineering Companies (ACEC) Washington State 2025 Witner Meeting. "Building Washington's Civil Engineering Workforce: Pathways, Challenges, and Solutions." Dec. 11, 2025, Bellevue, WA.
15. 2025 Oahu MPO Mobile Workshop at the University of Washington. "What PacTrans Does and How to Partner Up." Oct. 15, 2025. Seattle, WA.
16. Future World Vision: AI and Civil Engineering – Current State of Practice and Ensuring Opportunities at the ASCE 2025 Convention. "Hot Topics in Artificial Intelligence and Their Applications in Civil Engineering." Oct. 11, 2025. Seattle, WA.
17. ASCE Center for Technical Advancement (CTA) Smart Infrastructure Workshop. "Smart Infrastructure Technologies and Future Directions." Sept. 28, 2025. Athens, GA.
18. Distinguished Speaker for the 2025 USDOT National Center for Transportation Cybersecurity and Resiliency (TraCR) webinar. "Advances and Challenges in Using Edge AI to Address Transportation Safety Challenges." Sept. 23, 2025.
19. ASCE Center for Technical Advancement (CTA) AI Workshop. "Vision on AI Applications in Civil Engineering." Sept. 18, 2025. Salt Lake City, Utah.
20. Panel Session on AI research and implementation in DOTs. "Status of AI Research and Potentials for Transportation Applications. July 14, 2025. Billings, Montana.
21. Research Collaborations Workshop at the 2025 ASCE International Conference on Transportation and Development. "Strengthening Research Collaborations with Public Agencies." June 8, 2025.
22. Plenary Session #3: Reaching the Destination – Building Blocks Along the Journey at the Navigating the Future of Traffic Management International Symposium. "Opportunities for Innovation and Technologies When Managing System Changes." July 2, 2025. Athens, Grance.
23. Session 3A: How to Govern the Use of AI in Traffic Management at the Navigating the Future of Traffic Management International Symposium. "Enhancing Mobility with AI." July 1, 2025. Athens, Grance.
24. Argonne National Laboratory and University of Chicago's AI & Energy Futures: Sectoral Impacts and Innovations. "AI Applications in Transportation." May 15, 2025. Chicago, IL.
25. University of Illinois Urbana-Champaign (UIUC) Kent Seminar Distinguished Speaker. "Shaping the Future of Road Transportation with Customized AI and Edge Computing." Apr. 21, 2025. Urbana, Illinois.
26. Massachusetts Institute of Technology (MIT) Henry L. Pierce Laboratory Seminar Series. "Transforming the Future of Transportation Safety and Mobility with Customized AI and Edge Computing." Apr. 16, 2025. Cambridge, Massachusetts.
27. Washington State Association of County Engineers and Oregon Association of County Engineers and Surveyors Joint Board Leadership Meeting. "Workforce Challenges in Washington State." March 24, 2025. Stevenson, WA.
28. ASCE Generative AI Workshop. "Intelligent Traffic Chatbot for Real-time Traffic Performance Monitoring and Information Sharing." Scheduled Mar. 12, 2025. College Park, Maryland.
29. AJSE's AI Transforming Systems (AITS) Symposium. "Revolutionizing Road Transportation Systems Through Customized AI and Edge Computing." Feb. 6, 2025. Dhahran, Saudi Arabia.
30. The 8th NYUAD Transportation Symposium. "Edge AI Empowered Smart Hub for Transportation Safety and Infrastructure Intelligence Enhancement." Jan. 10, 2025. New York City, New York.

31. TRB Annual Meeting Lectern Session 2064: State of the Art and Future Vision on Artificial Intelligence Research and Applications in Transportation. "Hot Topics in Artificial Intelligence and Planned Activities." Jan. 6, 2025.
32. University of Arizona Center for Applied Transportation Sciences Seminar. "Leveraging Customized AI and Edge Computing for Enhanced Transportation Safety and Mobility." Dec. 4, 2024. Tucson, Arizona.
33. International Perspective to Achieving Vision Zero Webinar Panel. "Emerging Technologies for Road Safety Enhancement." Nov. 13, 2024. Seattle, Washington.
34. US-Korea Conference 2024. "Enhancing Transportation Safety and Mobility Using Customized AI and Edge Computing." Aug. 23, 2024. San Francisco, California.
35. The 9th International Symposium on Transportation Safety. "Enhancing Transportation Safety with Edge Computing Technologies." July 27, 2024. Shanghai, China.
36. CICTP 2024 Keynote Speech. "Integrating Deep Neural Network and Large Language Models for Network-wide Traffic Performance Assessment and Forecasting." July 24, 2024, Shenzhen, China.
37. The 4th Forum on Frontiers of Science and Engineering (FFSE). "Edge AI for Mobility and Safety Enhancement." July 22, 2024, Hong Kong.
38. Boeing Workshop with China Cargo Group. "Transportation Safety and Mobility Enhancement with AI and Edge Computing Technologies." June 25, 2024. Seattle, Washington.
39. TRB 2nd International Conference and Peer Exchange on Roadside Safety. "Computer Vision Advances: Extracting Safety Data from Video Images." June 23, 2024. Orlando, Florida.
40. CUTC Summer Meeting. "Developing Ongoing Collaborations with and among State DOTs." June 11, 2024. South Padre Island, Texas.
41. MS2 NatMEC 2024 Dinner Event Speech. "Edge AI for Traffic Sensing and Monitoring." June 3, 2024. Boise, Idaho.
42. Data Driven Solutions and AI Technologies for Safer and Smarter Mobility Workshop. "Revolutionizing Road Transportation with AI: Challenges and Opportunities." May 30, 2024.
43. Data Driven Solutions and AI Technologies for Safer and Smarter Mobility Workshop. "Enhancing Transportation Safety and Infrastructure Intelligence Through Customized AI and Edge Computing." May 30, 2024.
44. USDOT AI Assurance Workshop. "Building Trustworthy AI with Robust Data Preparations." May 29, 2024.
45. AI in Motion: Shaping the Future of Mobility and Safety Symposium Fireside Chat with Matt Van Horn. "Trailblazing Mobility: Fireside Chat with Matt Van Horn, Co-founder of Zimride (Now Lyft)." May 16, 2024.
46. Rensselaer Polytechnic Institute Civil and Environmental Engineering Seminar. "Integrating Deep Neural Network and Large Language Models for Network-wide Traffic Performance Assessment and Forecasting." April 3, 2024.
47. Freight Mobility Research Institute at Florida Atlantic University Seminar. "Enhancing Transportation Safety and Infrastructure Intelligence Through Customized AI and Edge Computing." Mar. 22, 2024.
48. AirSage Fireside Chat with Jonathan Silverberg. "The Future of AI in Transportation." March 12, 2024.
49. Washington State Transportation Commission. "Innovative Research on Smart Infrastructure and Artificial Intelligence." Jan. 18, 2024.
50. TRB ACS20 Safety Performance and Analysis Committee Meeting. "NCHRP 17-100 Leveraging Artificial Intelligence and Big Data to Enhance Safety Analysis Project Update." Jan. 10, 2024.

51. TRB AED20-2 Urban Big Data Subcommittee Meeting. "Unified Framework for Multi-Contrastive Learning in Spatial-Temporal Traffic Forecasting." Jan. 9, 2024.
52. TRB Annual Meeting Lectern Session 2006: State of the Art and Future Vision on Artificial Intelligence Research and Applications in Transportation. "Hot Topics in Artificial Intelligence and Planned Activities." Jan. 8, 2024.
53. The 2023 Conference on Smart and Green Transportation for Sustainable Development. "Forecasting Traffic Performance Using Advanced Deep Neural Network for Informed Travel Decisions." Dec. 16, 2023.
54. Research and Technology Coordinating Committee under the National Academy of Sciences, Engineering, and Medicine. "Revolutionizing Road Transportation with AI: Challenges and Opportunities." Dec. 6, 2023.
55. ASCE Francis C. Turner Lecture. "Revolutionizing Road Transportation with Artificial Intelligence Empowered Technologies." Nov. 15, 2023.
56. Tsinghua Wudaokou EMBA Visitation Workshop. "Artificial Intelligence and Edge Computing for Safer and Smarter Mobility." Nov. 3, 2023.
57. Norwegian Public Roads Administration. "University of Washington Transportation Research Resources and Example Projects at the PacTrans STAR Lab." Oct. 30, 2023.
58. Norwegian University of Technology (NTNU). "Developing AI-Empowered Transportation Technologies for Improved Mobility and Safety." Oct. 29, 2023.
59. Mid-year Meeting of the TRB AME30 Native American Transportation Issues. "Vision and Activities for the TRB AED50 AI and Advanced Computing Applications Committee." Sept. 25, 2023.
60. 2023 Affiliated Tribes for Northwest Indians (ATNI) Annual Convention Transportation Committee Meeting. "Northwestern Tribal Technical Assistance Program Center and PacTrans Introduction and Resources." Sept. 19, 2023.
61. Cooper Jones Active Transportation Safety Council (ATSC) Meeting. "Applying Intelligent Transportation Systems Technology to Pedestrian/Bicyclist Safety." July 18, 2023.
62. 49th International Traffic Safety Records Forum. Panelist on Tribal Communities and Traffic Records. July 11, 2023.
63. ITS America & TRB Automated Vehicle/Shared Mobility Forum on AI in Automated Mobility. "Artificial Intelligence for Safer, More Efficient, and Resilient Transportation." July 10, 2023.
64. 2023 International Symposium on Freeway and Tollway Operations. "Forecasting Traffic Performance Using Advanced Deep Neural Network for Informed Freeway Operational Decisions." June 29, 2023.
65. 2023 International Symposium on Freeway and Tollway Operations. "Cooperative and Comprehensive Multi-task Sensing and Edge-AI-Empowered Interaction for Digital Twin Model Development and Applications." June 28, 2023.
66. Oklahoma DOT Peer Exchange. "PacTrans Collaborations with State DOTs." May 24, 2023.
67. Northwest Region Bureau of Indian Affairs Transportation Symposium. "Services for the Tribal Community in the Northwest Region." May 16, 2023.
68. White House-Led Discussion on AI & Transportation. "Artificial Intelligence for Safer, More Efficient, and Resilient Transportation." May 15, 2023.
69. TAAC-Tsinghua University Joint Symposium on Career Development. "Team Buildup and Career Development." April 27, 2023.
70. FHWA AI Showcase. "AI and Advanced Computing in Transportation Research." April 27, 2023.

71. Norwegian Public Roads Administration. "STAR Lab Research Highlights." Online Research Roundtable. March 27, 2023.
72. George Mason University Seminar. "Forecasting Traffic Like Weather: An Advanced Deep Neural Network Approach." March 22, 2023.
73. Innovation Engine for Digital Urban & Rural Equity (iEnDURE) Symposium. Using the Northwestern Tribal Technical Assistance Program Center Platform to Help Address Equity Challenges. March 1, 2023.
74. TRB Annual Meeting Lectern Session 3006: State of the Art and Future Vision on Artificial Intelligence Research and Applications in Transportation. "Hot Topics in Artificial Intelligence and Planned Activities." Jan. 10, 2023.
75. TRB ACS20(1) Safety Analytical Methods Subcommittee Meeting. "Methods and Data Used in the NCHRP 17-100 Project." Washington, D.C., Jan. 9, 2023.
76. TRB ACP40 Committee Meeting. "Leveraging Artificial Intelligence and Big Data to Enhance Safety Analysis." Washington, D.C., Jan. 9, 2023.
77. TRB Workshop on Emerging Technology Research Implementation in the United States and China. "Development of the AIWaysion Comprehensive Traffic Sensing Platform." Washington D.C., Jan. 8, 2023.
78. Civilian Aviation Flight University of China. "Challenges and Opportunities Faced by Transportation Engineering in the Context of Smart Cities." Online Symposium. Nov. 2, 2022.
79. Keynote Speech at the 2022 Jiangsu Internet Conference Connected Vehicles Summit. "Edge Computing Method and Technology of Integrated Sensing and V2X Communications." Online Conference. Sept. 8, 2022.
80. Keynote Speech at the 2022 National Travel Monitoring Expo and Conference (NaTMEC). "Traffic Sensing and Edge Computing for Safer and Smarter Transportation Systems." Online Conference. June 13, 2022.
81. Workshop on Technology Transfer at the 2022 International Conference on Transportation and Development. "PacTrans Tech Transfer Activities." Seattle, WA. May 31, 2022.
82. University of Michigan NGTS Distinguished Lecture Series. "Edge-AI-Empowered Technology for Comprehensive Traffic Sensing and Cost-Effective V2X Applications." Ann Arbor, MI. March 31, 2022.
83. Office of Small and Disadvantaged Business Utilization Women and Girls Virtual Symposia. Panelist for "Artificial Intelligence: The Future of Mobility." Feb. 24, 2022.
84. Transportation Research Board Annual Meeting Lectern Session 1202: State of the Art and Future Vision on Artificial Intelligence Research and Applications in Transportation. "Vision on Artificial Intelligence and Advanced Computing Applications in Transportation." Jan. 11, 2022.
85. Transportation Research Board Annual Meeting Workshop 1002: Assessing Performance, Capacities, and Support for Traffic Management Systems. "Asessing the Performance of Traffic Management Systems." January 9, 2022.
86. FTC 18225 High Definition's Connection with Professionals Webinar Series. "AI Applications in Transportation Engineering." Nov. 6, 2021.
87. University of South Florida's Friday Transportation Seminar Series. "Customized AI and Edge Computing for Safer and Smarter Transportation Infrastructure Systems." October 29, 2021.
88. The Graduate School's Green Transportation and Technology Summer Program at Changsha University of Science and Technology. "From Data Poor to Data Rich: New Challenges and Opportunities in Traffic Engineering." July 20, 2021.
89. Tsinghua University Civil Engineering Symposium for Celebrating the 110th Anniversary. "Transportation Engineering Current Practice and Future Opportunities." April 23, 2021.

90. Transportation Research Board Committee Coordinator Webinar. "Overview of the University Transportation Center Program." Mar. 16, 2021.
91. Transportation Research Board Annual Meeting's Workshop on Applications of Machine Learning to Transportation. "Edge AI and Computer Vision for Real-Time Near-Crash Detection for Automated Vehicle Testing." Jan. 22, 2021.
92. Connected Cities with Smart Transportation (C2Smart) Webinar. "Edge Computing for Safer and Smarter Transportation Applications." Nov. 24, 2020.
93. Freight Mobility Research Institute. "Making Transportation Infrastructure Smarter Using IoT and AI Technologies." Nov. 17, 2020.
94. Chinese Overseas Transportation Association Online Symposium. "Transportation Career Development." Oct. 26, 2020.
95. IEEE International Smart Cities Virtual Conference. "Effects of COVID-19 on the Transportation and Energy Industry: Discussion on the Impacts, the Usefulness of Data Dashboards and Lesson Learned." Sept. 29, 2020.
96. PacTrans Webinar. Spoke jointly with Franz Loewenherz and Noah Budnick. "Partner up for Smart Mobility and Safer Roads: Application of Video Analytics Technologies." Sept. 3, 2020.
97. Puget Sound Regional Council's Regional Traffic Operations Committee. "Quantifying Road Network Efficiency Using Traffic Performance Scores." Sept. 3, 2020.
98. Washington State Transportation Innovation Council. "PacTrans Education Connection." June 18, 2020.
99. PacTrans Webinar. "Learning from Network-wide Traffic Sensor Data: Vehicle Travel and Traffic Performance Changes under the Influence of COVID-19." May 19, 2020.
100. The Warren Lecture Series at the University of Minnesota. "Customized Machine Learning for Safer and Smarter Transportation Applications." Jan. 31, 2020.
101. The Florida Agricultural and Mechanical University – Florida State University Civil Engineering Seminar. "Artificial Intelligence for Smarter Transportation and Infrastructure Systems." Tallahassee, Florida, Nov. 22, 2019.
102. The 2019 Chinese Institute of Engineers Scientific Symposium on Emerging Artificial Intelligence (AI) Applications. "AI for Smarter Transportation and Infrastructure Systems." Bellevue, WA, Sept. 15, 2019.
103. The 5th International Symposium on Open Intelligent Transportation Systems. "Making Transportation Infrastructure Smarter with IoT and Bigdata Technologies." Honolulu, Aug. 20, 2019.
104. The 5th Annual Symposium on Transportation Informatics. "Making Transportation Infrastructure Smarter with IoT Technologies." Buffalo, New York, Aug. 8, 2019.
105. The 7th International Symposium on Transportation Safety. "Video-based Detection of Near-Miss Events for Transit Vehicle Safety Improvements." Shanghai, July 9, 2019.
106. CICTP 2019. "Customize Machine Learning for Transportation Applications." Nanjing, July 5, 2019.
107. Global Innovation Exchange. "Mobile Unit for Sensing Traffic with Self-Learning Capabilities." Bellevue, WA, May 30, 2019.
108. 2019 UTC Spotlight Conference. Panel of UTC Leaders. Washington DC, May 14, 2019.
109. Washington State Transportation Commission. "STAR Lab Research on Connected and Autonomous Vehicle Systems." Olympia, WA, Mar. 19, 2019.
110. University of Florida Transportation Institute Seminar. "Artificial Intelligence Applications in Large-Scale Transportation System Analysis." Gainesville, FL, Feb. 28, 2019.

111. China Transportation Corporation Group. "Making Freeway a Smart and Controllable System." Xi'an, China, Feb. 21, 2019.
112. Target Zero Summit. "Video-based Detection of Near-Miss Events between Transit Vehicles and Pedestrians/Bicyclists." Bellevue, WA, Feb. 13, 2019.
113. Jiangsu Transportation Data Collection and Analysis Annual Meeting. "Mobile Sensing for Cost Effective Data Collection and Knowledge Discovery." Nanjing, Dec. 15, 2018.
114. Tsinghua University Transportation Seminar. "Artificial Intelligence Applications in Large-Scale Transportation System Analysis." Beijing, Dec. 13, 2018.
115. University of Pennsylvania's First Conference on Rethinking China's Urban Development Models. "Mobility as a Service for Future Urban Development." Philadelphia, Nov. 16, 2018.
116. ACEC Washington-Oregon Joint Fall Conference 2018. "Toward Smart and Connected Communities: Challenges and Opportunities." Suquamish, WA, Sept. 14, 2018.
117. CICTP 2018. "Enhancing Transportation Research with Machine Learning." Beijing, July 7, 2018.
118. International Symposium on Future Cities and Urban Transportation Brian. "Critical Technologies for Smart and Connected Transportation." Hangzhou, July 2, 2018.
119. Seafood Industry Transport Challenge. "Develop Technical Solutions to Address Practical Challenges in Transportation." Tromsø, Norway, June 13, 2018.
120. FHWA State Transportation Innovation Councils. "Smart Traffic Sensing and Big Data Analytics." Olympia, WA. May 15, 2018.
121. Keynote at Jiangsu ITS Conference. "Artificial Intelligence Methods for Complicated Transportation Problems." Nanjing, China. May 6, 2018.
122. Washington Traffic Safety Conference. "Regional Map Based Analytical Platform for Safety Data Collection and Analysis." Kennewick, WA. April 25, 2018.
123. University of Michigan NGTS Distinguished Lecture Series. "Artificial Intelligence Applications in Large-Scale Transportation System Analysis." Ann Arbor, MI. March 15, 2018.
124. Puget Sound Regional Council. "Smart Road Stickers for Traffic Safety and Efficiency." Seattle, WA. March 1, 2018.
125. Global Innovation Exchange. "Mobil Unit for Sensing Traffic." Bellevue, WA, Feb. 13, 2018.
126. Transportation Research Board Freeway Simulation Subcommittee Meeting. "Connected Vehicles Simulation Research on Adaptive Roadway Lighting Control." Washington D.C., Jan. 7, 2018.
127. Global Symposium on Smart Manufacturing. "Critical Technologies for Smart and Connected Communities." Hangzhou, Nov. 18, 2017.
128. Keynote at the 3rd International Forum on Transport Big Data Sharing & Collaboration. "Designing Future Mobility: A Critical Mission of Transportation Data Scientists." Shenzhen, Nov. 17, 2017.
129. Harbin Institute of Technology. "Be Prepared for the Disruptive Technologies in Smart Transportation." Harbin, Nov. 3, 2017.
130. Smart Cities Symposium at the Future Forum. "Get Ready for the Disruptive Technologies in Smart Transportation." Beijing, Oct. 28, 2017.
131. Keynote at the 2017 Smart Transportation Forum of Jiangsu Province. "Transportation Data Science and Its Supporting Data Platform Technologies." Nanjing, Oct. 26, 2017.
132. Global Innovation Exchange. "Emerging Technologies in Intelligent Transportation Systems." Bellevue, WA, Sept. 17, 2017.
133. China-US Clean Energy Forum. "Data-Driven Analytical Framework and Algorithms for Traffic Emission and Fuel Consumption Analysis." Chengdu, Sept. 10, 2017.
134. TEDx hosted by Harbin No. 3 High School. "Smart Phones for Smarter Traffic." Harbin, Aug. 21, 2017.

135. CICTP 2017 Plenary Session. "Artificial Intelligence for Smart Transportation Decisions and Applications." Shanghai, July 7, 2017.
136. Keynote at ASCE International Workshop on Computing in Civil Engineering (IWCCE). "Toward Smart and Connected Communities: Large-Scale Artificial Intelligence Applications and Platform." Seattle, June 26, 2017.
137. Innovations in Freight Data Workshop. "Video Analytics to Classify Movements and Vehicles." Irvine, May 18, 2017.
138. ITS Borealis Conference: E8 the Intelligent Road –towards Automated Driving? "Emerging ITS Technologies and Their Impacts on Transportation Practice." Tromsø, Norway, May 11, 2017.
139. Shenzhen Urban Planning and Transportation Research Center. "Mining Big Data for Big Transportation Decisions and Discoveries: E-Science of Transportation Approach and Its Supporting Platform." Shenzhen, China, April 7, 2017.
140. Beijing Urban Construction and Design Group. "PacTrans STAR Lab Research." Beijing, China, April 5, 2017.
141. Huaiyin Institute of Technology. "Mining Big Data for Big Transportation Decisions and Discoveries: E-Science of Transportation Approach and Its Supporting Platform." Huaian, China, Feb. 25, 2017.
142. Open ITS Symposium. "Data-Driven Transportation Research: Past and Future." Shanghai, China, Dec. 17, 2016.
143. ITS Washington 2016 Annual Meeting. "Connected Vehicle Testbed in the Smart Cities Context." Mercer Island, Washington, Dec. 6, 2016.
144. Keynote at the Global Spatial Data Infrastructure 15th World Conference. "Bigdata-Driven Transportation Decisions and Discoveries: E-Science Approach and Its Supporting Platform." Taipei, Nov. 29, 2016.
145. Hangzhou Jintong Incorporation. "Bigdata-Driven Solutions to Smart Cities Applications." Hangzhou, China, Nov. 5, 2016.
146. The 2016 World Internet of Things (WIOT) Wuxi Summit. "Bigdata-Driven Solutions for Smart Transportation Applications." Wuxi, Jiangsu, Oct. 31, 2016.
147. Washington State Transit Insurance Pool Board Meeting. "New Progress in Collision Avoidance Research." Everett, Washington, Sept. 29, 2016.
148. Washington State Department of Transportation Public Transportation Conference. "Washington State Public Transit Collision Avoidance Pilot: UW Research." Wenatchee, Washington, Sept. 20, 2016.
149. Tongji University Bigdata Workshop. "Mining Big Data for Big Transportation Decisions and Discoveries: E-Science of Transportation Approach and Its Supporting Platform." Shanghai, China, July 16, 2016.
150. The 71st Taoyaka Seminar, the 322nd IDEC Seminar, and the ASMO Seminar. "Toward Smart and Connected Communities: Challenges and Opportunities in Transportation." Hiroshima, Japan, July 15, 2016.
151. CICTP 2016 Plenary Session. "Linking Bigdata to Smart Transportation Decisions and Applications." Shanghai, China, July 9, 2016.
152. Bigdata and Smart Transportation Workshop at Chiang'an University. "Traffic Monitoring and Data Extraction from UAV Video." Xi'an, China, July 2, 2016.
153. ASCE 2016 International Conference on Transportation and Development. "PacTrans Research Example: Mobile Sensing and Public Perception." Houston, Texas, June 28, 2016.

154. International Symposium on Enhancing Highway Performance (ISEHP). "Integrating Data analytics into Decision Makings for Traffic Operations." Berlin, Germany, June 16, 2016.
155. Gigabit City Summit. "Challenges and Opportunities in Smart Transportation Research under the Smart Cities Context." Kansas City, Missouri, May 17, 2016.
156. Gigabit City Summit. "The IEEE Smart Cities Initiative." Kansas City, Missouri, May 17, 2016.
157. UTC Safety Summit. "PacTrans Safety Research." Washington, DC, March 31, 2016.
158. Nanjing University of Science and Technology. "Transportation Bigdata Analytics for Smart Cities Applications." Nanjing, China, March 13, 2016.
159. Regional Smart Cities Workshop. "Transportation Big Data Analytics for Smart Cities." Redmond, Washington, February 23, 2016.
160. ITE/IMSA Joint Conference and Vendor Exhibition. "Transportation in Smart Cities." Seatac, Washington, February 8, 2016.
161. Second NIAC Workshop on Urban Science. "Challenges and Opportunities in Smart Transportation Research under the Smart Cities Context." Seattle, Washington, February 2, 2016.
162. Washington State House Transportation Committee. "Importance of ITS Research and Deployment." Olympia, Washington, January 27, 2016.
163. ITS Washington Annual Meeting. "Data-Driven Solutions for Large Scale Transportation Safety Analysis." Seattle, Washington, November 3, 2015.
164. Oklahoma Transportation Research Day. "DRIVE Net: A Large-Scale Online Data Platform for Performance Analysis and Decision Support." Oklahoma City, Oklahoma, Oct. 20, 2015.
165. Workshop of Innovative Technologies and Methods to Improve Transportation Systems. "Mobile Sensing for Pedestrian and Bicyclist Data." Southwest Jiaotong University, China, July 29, 2015.
166. Georgia Tech's National Center for Transportation Systems Productivity and Management (NCTSPM). "Transportation Big Data Analytics for Smart Cities Applications." Aug. 27, 2015.
167. CICTP 2015 Plenary Session. "Data-Driven Transportation Decision Making in the Smart Cities Context." Beijing, China, July 25, 2016.
168. Society for Knowledge Discovery in Distributed and Ubiquitous (KD2U) Environments. "Transportation Big Data Analytics for Network-wide Performance Analysis and Decision Support." NGDM'15. June 2, 2015.
169. Arkansas Transportation Research Council Annual Conference. "DRIVE Net: A Large-Scale Online Data Platform for Performance Analysis and Decision Support." May 21, 2015.
170. Wuxi's Smart City Kickoff Workshop. "Smart Transportation: Challenges and Opportunities." Wuxi City, China. May 18, 2015.
171. International Conference on Urban Traffic Safety. "Traffic Data Sensing Technologies." April 30, 2015.
172. Washington State Transit Insurance Pool Executive Meeting. "PacTrans Research on Transportation Safety." March 26, 2015.
173. Beijing Jiaotong University. "Transportation Big Data Analytics for Smart Cities Applications." March 20, 2015.
174. Chongqing Jiaotong University. "Traffic Sensing, Data Integration, and Analytical Framework toward Smart City Applications." March 16, 2015.
175. Southwest Jiaotong University. "Traffic Sensing, Data Integration, and Analytical Framework toward Smart City Applications." March 12, 2015.
176. Fast-forward 10 Years: How Information Technology Is Changing Transportation Planning, Engineering, and Operations at the 2015 Transportation Research Board Annual Meeting. "Big Data Analytics: Opportunities and Challenges for Transportation Professionals." January 12, 2015.

177. Beijing University of Civil Engineering and Architecture. "Mining Big Data for Big Transportation Decisions and Discoveries: E-Science of Transportation Approach and Its Supporting Platform." December 28, 2014.
178. Chang'an University. "Extracting Transit User Activity Information through Smart Card Data Mining." December 25, 2014.
179. ARTBA TransOvation 2014. "Harness the Power of Big Data: Challenges and Opportunities for Transportation Professionals." November 17, 2014.
180. Center for Advanced Transportation Education and Research (CATER) at the University of Nevada Reno. "Advanced Methods for Pedestrian and Bicyclist Sensing." Sept. 25, 2014.
181. Keynote speech at the 10th US-Japan-China Joint Symposium on Transportation: Transportation in the Era of Big Data. "From Data Poor to Data Rich: New Challenges and Opportunities for Transportation Professionals." July 25, 2014.
182. Research Institute of Highway, China Ministry of Transportation. "Creating a New Pedestrian and Bicyclist Data Stream through Big Data Mining." July 15, 2014.
183. Shanghai Jiaotong University. "Big Data to Big Discoveries and Big Decisions: Challenges, Opportunities, and Actions for Transportation Professionals." July 11, 2014.
184. Tongji University Transportation Safety Workshop. "Modeling Animal–Vehicle Collisions Considering Animal–Vehicle Interactions." July 8, 2014.
185. CICTP 2014 Plenary Session. "Advanced Methods for Pedestrian and Bicyclist Sensing." July 6, 2014.
186. Hong Kong Society for Transportation Studies. "Mining Big Data for Big Transportation Decisions and Discoveries: E-Science of Transportation Approach and Its Supporting Platform." March 28, 2014.
187. Hong Kong University of Science and Technology. "Traffic Accident Modeling: From Black-Box Regression to Mechanism-Based Approach." March 26, 2014.
188. USDOT Office of the Assistant Secretary for Research and Technology (OST-R). "Big Data to Big Discoveries and Big Decisions: Challenges and Opportunities for Transportation Professionals." February 19, 2014.
189. UC Irvine. "Linking Big Data to Big Discoveries and Big Decisions: DRIVE Net Platform." February 14, 2014.
190. Chang'an University. "Developing E-Science Transportation Theory and Platform for Big Data, Big Discovery, and Big Decision." December 13, 2013.
191. International Workshop on Multi-modal Transportation at Beijing University of Technology. "Modeling Spatial Growth of High Speed Rail Service Network in China Based on Small World Effects." August 17, 2013.
192. CICTP 2013 Plenary Session. "Smart Card Data Mining and Inference for Transit System Optimization and Performance Improvement." August 16, 2013.
193. CICTP 2013 Spatial Approaches for Transportation Decision Making Workshop. "DRIVE Net: An E-Science Transportation Platform for Large-Scale System Analysis and Informed Decisions." August 14, 2013.
194. Transportation Research and Analysis Computing Center (TRACC) at Argonne National Laboratory. "Developing an Online Tool for Data-Driven Solutions to Transportation Problems." July 22, 2013.
195. The 1st Shenzhen International Low-Carbon City Conference and the 4th Low-Carbon City Development World Forum. "E-Science Transportation Infrastructure for Big Data, Big Discovery, and Big Decisions." June 18, 2013.

196. Southeast University Career Development Workshop. "Tips for Identifying Your Successful Career Path." Mar. 29, 2013.
197. Zhejiang University of Technology. "Recent Research Advances at the STAR Lab." Mar. 25, 2013.
198. Stanford University Sustainable Transportation Seminar. "DRIVE Net: An E-Science Transportation Platform for Big Data, Big Discovery, and Big Decision." Mar. 8, 2013.
199. Session jointly organized by TRB AHB40 and AHB35 at the Annual Meeting of Transportation Research Board. "Twin Cell Modeling Approach for Parallel Freeway Facilities – A Managed Lane Example." Jan. 15, 2013.
200. Freeway Simulation Subcommittee Meeting (AHB20(2)), Transportation Research Board, Washington DC, "NCHRP 03-96: Analysis of Managed Lanes on Freeway Facilities." Jan. 13, 2013.
201. Beijing Institute of Technology Transportation Seminar. "HOT Lane Gets Hot: Data-Driven Investigations on HOT Issues." Dec. 18, 2012.
202. Zhejiang University Transportation Seminar. "STAR Lab Research on Traffic Sensing and Sensor Data Analysis." Dec. 12, 2012.
203. 2012 IEEE Intelligent Transportation Systems Conference Workshop on Pedestrian and Bicycle Detection. "Advanced Methods for Pedestrian Detection." Sept. 16, 2012.
204. 2012 China – U.S. Bilateral Forum on Strategic Development in Transportation. "From Empirical Decisions to Informed Decisions in Transportation Planning and Engineering: What Is Missing?" Aug. 7, 2012.
205. Seminar on Managing Urban Transportation Database hosted by China Academy of Transportation Science. "Cyber Urban Data Net: Toward Informed Decisions in Transportation Planning and Engineering." Aug. 6, 2012.
206. Keynote speech at the 12th COTA International Conference of Transportation Professionals (CICTP 2012). "HOT Lane Gets Hot: Tolling for Travel Reliability and Sustainability." August 4, 2012.
207. Research Institute of Tsinghua University in Shenzhen. "Traffic Sensing Technologies and Sensor Data Mining." June 29, 2012.
208. Sun Yat-Sen Universtiy. "Vehicle and Pedestrian Sensing for Enhanced Traffic Management Intelligence." June 27, 2012.
209. Symposium on Innovations in Traffic Flow Theory, and Highway Capacity and Quality of Service. "Increasing the Chance of Success: Research Needs Identification and Problem Statement Preparation." June 19, 2012.
210. Peking University. "Traffic Sensing and Sensor Data Mining." Mar. 20, 2012.
211. Northwest Transportation Conference for 2012 in Corvallis. "Criteria for Selection and Application of Advanced Traffic Signal Systems." Feb. 8, 2012.
212. Shenzhen University. "E-Science and Next Generation Transportation Information System." Dec. 15, 2011.
213. The 2011 Annual Meeting of ITS Washington. "Digital Roadway Interactive Visualization and Evaluation Network: DRIVE Net." Nov. 1, 2011.
214. China Academy of Transportation Sciences. "Transportation Data and E-Science of Transportation." Aug. 27, 2011.
215. Keynote speech at the 11th International Conference of Chinese Transportation Professionals (ICCTP 2011). "HOT Lane Gets Hot: Tolling for Travel Reliability and Sustainability." August 16, 2011.
216. Western Harbin Development Committee. "Integrating Data for Traffic Management Decisions." July 8, 2011.

217. Chinese People's University of Public Security. "Applying Information Technologies to Intelligent Traffic Management." July 5, 2011.
218. Transportation Research Board Highway Capacity and Quality of Services Committee Research Workshop. "DRIVE Net: a New Research Platform for Highway Capacity and Quality of Services." Stockholm, Sweden, July 2, 2011.
219. University Transportation Research Center 2 at City College of New York. "HOT Lane Gets Hot: Field Observations and Scientific Investigations on HOT Issues." December 10, 2010.
220. University of Maryland. "Collecting Pedestrian and Cyclist Movement Data Using Surveillance Video Cameras." December 3, 2010.
221. University of Akron. "DRIVE Net: An E-Science Transportation Platform for Data Sharing, Modeling, and Visualization." November 4, 2010.
222. Royal Institute of Technology (KTH). "DRIVE Net: An E-Science Transportation Platform for Data Sharing, Modeling, and Visualization." September 17, 2010, Stockholm, Sweden.
223. Norwegian University of Science and Technology (NTNU). "Capturing Live Traffic: Detection Research at the STAR Lab." September 15, 2010, Trondheim, Norway.
224. Traffic Safety Workshop at Tongji University, Shanghai, China. "Diagonal Inflated Bivariate Poisson Model for Animal Vehicle Collisions." August 9, 2010.
225. Keynote speech at the 10th International Conference of Chinese Transportation Professionals (ICCTP 2010). "An E-Science of Transportation Platform: DriveNet." August 6, 2010.
226. Workshop for the 10th International Conference of Chinese Transportation Professionals. "Review Procedures for English Journal Articles." Aug. 4, 2010.
227. China State Laboratory of Information Science and Technology Seminar at Tsinghua University, Beijing, China. "Toward a Controllable System to Ensure Reliable Freeway Travel." June 7, 2010.
228. Beijing Jiaotong University. "Flat-Rate Transit Intelligent Card Data Mining for Improved Passenger Origin-Destination Data." June 4, 2010.
229. Future Transportation Technologies Symposium at Harbin Institute of Technology, Harbin, China. "Traffic Information Extraction and Quality Control on Field Sensors Measurements." May 26, 2010.
230. Tongji University Graduate Seminar, Shanghai China. "Making Freeway a Controllable System." May 5, 2010.
231. Washington State Department of Transportation Congestion Workshop. "Incident-Induced Delay Estimation Using Traffic Sensor Data." April 19, 2010.
232. Beijing Transportation Research Center. "Intelligent Card Transaction Data Mining for Flat-Rate Transit Passengers." April 16, 2010.
233. Beijing Transportation Research Center. "Automatic Traffic Data Collection Using Surveillance Videos Cameras." April 9, 2010.
234. Beijing Jiaotong University Graduate Seminar in Software Applications. "Driver Behavior Models and Simulation Examples." April 8, 2010.
235. Beijing Jiaotong University Graduate Seminar in Software Applications. "Traffic Control and Simulation Introduction." April 6, 2010.
236. Puget Sound Regional Council. "Digital Roadway Interactive Visualization and Evaluation Network." April 1, 2010.
237. Beijing Transportation Research Center. "Loop Detector Tune Up and Single-Loop based Vehicle Classification." February 5, 2010.
238. Simulation workshop at the 2010 Annual Meeting of Transportation Research Board. "Simulation on Customized Dynamic Tolling Strategies for HOT Lane Operations." January 10, 2010.

239. Research subcommittee meeting for AHB35 at the 2010 Annual Meeting of Transportation Research Board. "Analysis of Managed Lanes on Freeway Facilities." January 11, 2010.
240. Research subcommittee meeting for AHB20 at the 2010 Annual Meeting of Transportation Research Board. "NCHRP 03-96 Update." January 10, 2010.
241. USDOT Traffic Sensor Workshop, Washington DC. "Effective and Practical Method and Tool for Loop Detector Tune-Up." December 2, 2009.
242. Institute of Rock and Soil Mechanics, China Academy of Science, Wuhan. "Video-based Vehicle Detection and Classification." November 27, 2009.
243. State Key Lab of Information Engineering in Surveying, Mapping and Remote Sensing, Wuhan University, Wuhan, China. "Traffic Sensing and ITS Research at the STAR Lab." November 27, 2009.
244. Beijing Transportation Research Center, Beijing, China. "STAR Lab Research Introduction." November 20, 2009.
245. USDOT National Speed Summit, Tampa, Florida. "Traffic Speed Data Extraction and Quality Control." November 4, 2009.
246. Washington State DOT Annual Traffic Engineers Meeting, Vancouver, Washington. "Bluetooth-based Travel Time Data Collection." October 13, 2009.
247. TRB Joint Summer Meeting, Seattle, Washington. "Traffic Information Extraction and Quality Control: Cost-Effective Hardware and Software Solutions." July 20, 2009.
248. ITE Washington 2009 Annual Meeting, Tulalip, Washington, "Cost-Effective Traffic Data Collection Using Bluetooth MAC Address Matching." June 8, 2009.
249. Urban Traffic Engineer's Council (UTEC) Meeting, Kent, Washington, "Travel Time via Bluetooth: A Feasibility Study." Feb. 12, 2009.
250. New Technology Subcommittee Meeting (ABJ40(4)), Transportation Research Board, Washington DC, "Pedestrian and Bicycle Data Collection Using Video Imaging." Jan. 12, 2009.
251. Freeway Simulation Subcommittee Meeting (AHB20(2)), Transportation Research Board, Washington DC, "Simulating Dynamic Tolling Impacts for HOT Lane Operations: Approach and Implementation." Jan. 11, 2009.
252. Annual Meeting of ITS Washington, Bellevue, Washington, "Bluetooth-based Traffic Data Collection Technologies and Potential Applications." Nov. 12, 2008.
253. Beijing Jiaotong University, Beijing, China, "Freeway Incident Impacts and Operational Strategies." Sept. 15, 2008.
254. Beijing Transportation Research Center, Beijing, China, "Traffic Sensing and Information Extraction: Challenges and Opportunities." Sept. 16, 2008.
255. Tongji University, Shanghai, China, "Traffic Detection Technologies: Current Status and Future Directions." June 27, 2008.
256. Beijing Jiaotong University, Beijing, China, "Traffic Detection Technologies: Current Status and Future Directions." June 25, 2008.
257. Tsinghua University, Beijing, China, "Traffic Detection Technologies: Current Status and Future Directions." June 24, 2008.
258. Portland State University, Portland, Oregon, "Loop Detector Tune Up with ALEDA." Sept. 19, 2007.
259. Dalian University of Technology short course, Dalian, China, "Traffic Detection Systems and Applications." Aug. 29 – Sept. 2, 2007.
260. Microsoft Research Asia, Beijing, "What Is Computer Engineers' Role in Fighting Against Traffic Congestion?" August 27, 2007.

261. University of California at Davis, Davis, "Fighting for Better Traffic Data: What Are We Doing at the STAR Lab?" June 26, 2007.
262. Annual Meeting of ITS Washington, Bellevue, Washington, "Video Image Processing Research at the STAR Lab", Oct. 3, 2006.
263. Harbin Institute of Technology, Harbin, China. "Traffic Detection Research in the STAR Lab." Aug. 25, 2005.
264. The 2nd Kobe University –University of Washington International Symposium on Design Strategy towards Safety and Symbiosis of Urban Space, Kobe, Japan, "Monitoring Freeway Systems in Real Time Using Existing Traffic Sensors." June 26, 2005.
265. ITS Committee of the Japan Society of Civil Engineers, "Traffic Detection Systems in ITS Applications." June 23, 2005.
266. The Second Symposium for the ABC's of Integrating Intelligent Transportation Systems (ITS), Public Safety, Security, and Emergency Management. Las Vegas, "Application of Cameras for Traffic Video Detection and Public Security." June 1, 2005.
267. Beijing University of Technology, China, "Future Transportation Technologies." Sept. 9, 2004.
268. Beijing Jiaotong University, Beijing, China, "ITS Research and Technologies", Sept. 8, 2004.
269. Tsinghua University short course, Beijing, China, "Introduction to Traffic Detection Systems." Aug. 30 – Sept. 10, 2004.
270. Washington State Department of Transportation Advanced Technology Branch (ATB) Seminar, Olympia, "Dual Loop Detector Tune Up for Better Truck and Speed Data." Mar. 23, 2004.
271. Portland State University, Portland, "Monitoring Freeway Systems in Real Time Using Existing Single-Loop Detectors." Oct. 31, 2003.
272. Strategic Planning Seminar, Port Authority of New York & New Jersey, "Future Transportation Technologies." Aug. 7, 2003.
273. Radio Frequency Identification (RFID) Workshop, Seattle, "Tracking Vehicles with Integrated Systems of GPS and INS." June 18, 2003.
274. Institute of Transportation Research, Tsinghua University, China, "Recent Developments in Traffic Safety Study." Oct. 7, 1998.
275. Traffic Study Symposium, University of Tokyo, Japan, "Negative Binomial Regression Models for Intersection Accident Risk Evaluation." Sept. 24, 1998.

Presentations and posters given at conferences.

1. Chen, Kehua, Ryan Feng Lin, Shucheng Zhang, and Yinhai Wang**.** "Deep Fictitious Play-Based Potential Differential Games for Learning Human-Like Interaction at Unsignalized Intersections." Presented by **Kehua Chen** at ASCE ICTD. July. 2026.
2. Jantarathaneewat, Nutvara, Kehua Chen, Bingzhang Wang, and Yinhai Wang. "Temporal Mixture of Experts for Truck Parking Availability Prediction." Presented by **Nutvara Jantarathaneewat** at the 2026 ASCE International Conference on Transportation and Development. July 28 - August 1, 2026.
3. Jantarathaneewat, Nutvara, Kehua (Zeon) Chen, Yinhai Wang, Matt Neeley, and Robert Stull. "Smart and Cooperative Truck Parking Information Management System (TPIMS)." Presented by **Nutvara Jantarathaneewat** at the 21st Annual Western States Forum, June 16-18. 2026.
4. Jantarathaneewat, Nutvara, Muhammad Monjurul Karim, and Yinhai Wang. "Digital Twins for Safer and Smarter Rural Road Networks." Presented by **Nutvara Jantarathaneewat** at Engineered Solutions for Low Volume Roads through Graduate Research for Standing Technical Committee on Low Volume and Rural Roads (AKL17) webinar, April 16. 2026.

5. Jantarathaneewat, Nutvara, Kehua Chen, and Yinhai Wang. "Smart and Cooperative Truck Parking Information Management System." Presented by **Nutvara Jantarathaneewat** at the Safe Mobility Conference. Mar. 2026.
6. Nasri, Mehrdad, Jingyi He, Muhammad Monjurul Karim, and Yinhai Wang. "Can Surrogate Safety Measures Explain Crash Patterns at Signalized Intersections? Evidence from Network-Wide Connected-Vehicle Data Using Negative Binomial, Random Forest, and Diffusion GNN Models." Presented by **Mehrdad Nasri** at the Safe Mobility Conference. Mar. 2026.
7. Nasri, Mehrdad, Shucheng Zhang, and Yinhai Wang. "AI-Driven Extraction of Network-Wide Safety Indicators from Next-Generation Sensing Sources." Presented by **Mehrdad Nasri** at the Safe Mobility Conference, Mar. 2026.
8. Wang, Zening, Chenxi Liu, Muhammad Karim, and Yinhai Wang. "Edge-Based Multi-Camera Vehicle Re-Identification: A Privacy-Preserving Approach to Urban Traffic Monitoring." Presented by **Zening Wang** at the 105th Annual Meeting of Transportation Research Board, Jan. 2026.
9. Nasri, Mehrdad, Muhammad Karim, Ryan Avery, and Yinhai Wang. "Identifying and Addressing Workforce Gaps in Transportation Infrastructure Projects: Evidence from Employer–Practitioner Surveys and Topic Modeling." Presented by **Mehrdad Nasri** at the 105th Annual Meeting of Transportation Research Board, Jan. 2026.
10. Dai, Bingyou, Xuesong Wang, Fengchun Yang, Yuxiang Feng, Yinhai Wang, and Mohammed Quddus. "Leveraging Large Language Models for Crash Causation Analysis Using In-Depth Crash Investigation Data." Presented by **Bingyou Dai** at the 105th Annual Meeting of Transportation Research Board, Jan. 2026.
11. Chen, Yanlin, Kehua Chen, and Yinhai Wang. "Physics-Embedded Gaussian Process for Traffic State Estimation." Presented by **Yanlin Chen** at the 105th Annual Meeting of Transportation Research Board, Jan. 2026.
12. Nasri, Mehrdad, Shuyi Yin, Shucheng Zhang, Yinhai Wang, and Venky Shankar. "AI-Driven Extraction of Network-Wide Safety Indicators from Next-Generation Sensing Sources." Presented by **Mehrdad Nasri** at the 105th Annual Meeting of Transportation Research Board, Jan. 2026.
13. Li, Yiqun, Ziyuan Pu, Junyi Zhang, and Yinhai Wang. "Reconstructed Then Predicted Network for Electric Vehicle Charging Demand Resisting Against Abnormal Values." Presented by **Yiqun Li** at the 105th Annual Meeting of Transportation Research Board, Jan. 2026.
14. Jantarathaneewat, Nutvara, Kehua Chen, Bingzhang Wang, and Yinhai Wang. "Temporal Mixture of Experts for Truck Parking Availability Prediction." Presented by **Nutvara Jantarathaneewat** at the 105th Annual Meeting of Transportation Research Board, Jan. 2026.
15. Wang, Bingzhang, Kehua Chen, Zhiyong Cui, and Yinhai Wang. "Collaborative-Distilled Diffusion Models (CDDM) for Accelerated and Lightweight Trajectory Prediction." Presented by **Bingzhang Wang** at the 105th Annual Meeting of Transportation Research Board, Jan. 2026.
16. Zhang, Shucheng, Kehua Chen, Bingzhang Wang, and Yinhai Wang. "CrashVLA: A Vision-Language-Action Framework for Online Generation of Safety-Critical Traffic Scenarios." Presented by **Shucheng Zhang** at the 105th Annual Meeting of Transportation Research Board, Jan. 2026.
17. Karim, Muhammad Monjurul, Yuang Zhang, Mehrdad Nasri, and Yinhai Wang. "More Than Motion: Vehicle Trajectory Prediction Using a Hierarchical Transformer with Dynamic Scene Attention." Presented by **Muhammad Karim** at the 105th Annual Meeting of Transportation Research Board, Jan. 2026.
18. Chen, Kehua, Shucheng Zhang, and Yinhai Wang. "Deep Fictitious Play-Based Potential Differential Games for Learning Human-Like Interaction at Unsignalized Intersections." Presented by **Kehua Chen** at the 105th Annual Meeting of Transportation Research Board, Jan. 2026.

19. Shi, Yan, Chen, Kehua, and Yinhai Wang. "Mixture-of-Experts for Robust and Efficient Vehicle Detection Across Domains on Edge Devices." Presented by **Yan Shi** at the 105th Annual Meeting of Transportation Research Board, Jan. 2026.
20. Chaikasetsin, Sruangsaeng, Jonah Lorica, and Yinhai Wang. "Crash-Modification Factors and Severity-Weighted Risk Reduction for Shared-Use Path and Roundabout Treatments on the Haxton Way Corridor, Lummi Reservation, WA." Presented by **Sruangsaeng Chaikasetsin** at the 105th Annual Meeting of Transportation Research Board, Jan. 2026.
21. Nasri, Mehrdad, Jingyi He, Muhammad Karim, Shucheng Zhang, and Yinhai Wang. "Can Surrogate Safety Measures Explain Crash Patterns at Signalized Intersections? Evidence from Large-Scale Connected-Vehicle Data Using Negative Binomial, Random Forest, and Diffusion GNN Models." Presented by **Mehrdad Nasri** at the 105th Annual Meeting of Transportation Research Board, Jan. 2026.
22. Jantarathaneewat, Nutvara, Tanyaluk Ruangket, Pitcha Wachiropathum, and Yinhai Wang. "Lighting Status Detection on Rural Roads: A Comparative Study of Traditional and Deep Vision Approaches for Edge Deployment." Presented by **Nutvara Jantarathaneewat** at the 105th Annual Meeting of Transportation Research Board, Jan. 2026.
23. Jingyi He, Kehua Chen*, Bingzhang Wang, and Yinhai Wang*. 2025. Communication aware Diffusion Models for Multi-Agent Trajectory Forecasting in Connected and Autonomous Vehicles. In The Tenth ACM/IEEE Symposium on Edge Computing (SEC '25), December 3–6, 2025, Arlington, VA, USA. ACM, New York, NY, USA, 7 pages. https://doi.org/10.1145/3769102.3774636.
24. Nasri, Mehrdad, and Yinhai Wang. "Machine Learning Pipeline for Road Luminaire Detection Using Open-Source Street-Level Imagery." Presented by **Mehrdad Nasri** at the TRB Conference on Data and AI for Transportation Advancement 2025, Seattle, May 27–29, 2025.
25. Zhang, Shucheng, and Yinhai Wang. "AI-Empowered Computer Vision Tool for Locating and Recognizing Traffic Signs." Presented by **Shucheng Zhang** at WSDOT Webinar Wednesday, June 18, 2025. Online. URL: https://www.gotostage.com/channel/0abd9eb61c7144baa4141b1c1af8b53d/recording/d60162ca53c2465a8492ea3fdd3a4318/watch?source=CHANNEL
26. Jantarathaneewat, Nutvara, Hao Frank Yang, and Yinhai Wang. "Smart and Cooperative Truck Parking Information Management System." Presented by **Nutvara Jantarathaneewat** at the 2025 ASCE International Conference on Transportation and Development. June 10, 2025.
27. Nasri, Mehrdad and Yinhai Wang. "AI & ML for Safety: Analyzing Connected Vehicle Data for Turning Movement Counts at Intersections." Presented by **Mehrdad Nasri** at the 2025 ASCE International Conference on Transportation and Development. June 10, 2025.
28. Nasri, Mehrdad and Yinhai Wang. "Analyzing Multi-Modal Road User Behavior with Big Data: Insights for Intersection Safety." Presented by **Mehrdad Nasri** at the 2025 ASCE International Conference on Transportation and Development. June 10, 2025.
29. Wang, Bingzhang, Muhammad Monjurul Karim, Mehrdad Nasri, and Yinhai Wang. "Cooperative Perception-Based Vehicle Trajectory Prediction and Conflict Estimation." Presented by **Bingzhang Wang** at the 2025 ASCE International Conference on Transportation and Development. June 10, 2025.
30. Jantarathaneewat, Nutvara, Tanyaluk Ruangket, and Yinhai Wang. "Evaluating the Effectiveness of Star Ratings for Road Accident Severity in Thailand's Rural Roads." Presented by **Nutvara Jantarathaneewat** at the 2025 ASCE International Conference on Transportation and Development. June 10, 2025.
31. Jantarathaneewat, Nutvara, Chenxi Liu, Shucheng Zhang, and Yinhai Wang. "Detecting Lateral Offset Distance on Rural Road in Thailand by Using Point Cloud Data : A Case Study." Presented

by **Nutvara Jantarathaneewat** at the 2025 ASCE International Conference on Transportation and Development. June 10, 2025.

32. Jantarathaneewat, Nutvara, Hao Yang, and Yinhai Wang. "Smart and Cooperative Truck Parking Information Management System." Presented by **Nutvara Jantarathaneewat** at the 2025 ASCE International Conference on Transportation and Development. June 10, 2025.
33. Nasri, Mehrdad and Yinhai Wang. "Improving Nighttime Driving Safety: Machine Learning for Street Luminaire Detection and Localization." Presented by **Mehrdad Nasri** at the 2025 ASCE International Conference on Transportation and Development. June 10, 2025.
34. Chaikasetsin, Sruangsaeng, Mehrdad Nasri, Chenxi Liu, and Yinhai Wang. "Zero-shot Learning based Cyclists Detection through Surveillance Systems." Presented by **Sruangsaeng Chaikasetsin** at the 2025 ASCE International Conference on Transportation and Development. June 10, 2025.
35. Wang, Bingzhang, Muhammad Monjurul Karim, Chenxi Liu, and Yinhai Wang. "LLM-Enhanced Traffic Performance Analytics: A Real-Time Data Informed Intelligent ChatBot." Presented by **Bingzhang Wang** at the 104th Annual Meeting of Transportation Research Board, Jan. 2025.
36. Jantarathaneewat, Nutvara, Chenxi Liu, Shucheng Zhang, and Yinhai Wang. "Detecting Lateral Offset Distance on Rural Road in Thailand by Using Point Cloud Data: A Case Study." Presented by **Nutvara Jantarathaneewat** at the 104th Annual Meeting of Transportation Research Board, Jan. 2025.
37. Yang, Weida, Zhizhou Wu, Yinhai Wang, and Yunyi Liang. "Accurate and Sample Efficient Driver Takeover Time Prediction in Autonomous Driving with Privacy Preservation: A Federated Meta-Attentive Interpretable Tabular Earning Approach." Presented by **Weida Yang** at the 104th Annual Meeting of Transportation Research Board, Jan. 2025.
38. Li, Yiqun, Ziyuan Pu, Pei Liu, Junyi Zhang, and Yinhai Wang. "Accurate and Sample Efficient Driver Takeover Time Prediction in Autonomous Driving with Privacy Preservation: A Federated Meta-Attentive Interpretable Tabular Earning Approach." Presented by **Ziyuan Pu** at the 104th Annual Meeting of Transportation Research Board, Jan. 2025.
39. Zhang, Tongtong, Zhiyong Cui, Bingzhang Wang, Yilong Ren, Haiyang Yu, and Yinhai Wang. "Pre-Mixer: Multi-Layered Perceptron (MLP)-Based Pre-Training Enhanced MLP Mixers for Large-Scale Traffic Forecasting." Presented by **Bingzhang Wang** at the 104th Annual Meeting of Transportation Research Board, Jan. 2025.
40. Chaikasetsin, Sruangsaeng, Mehrdad Nasri, Hanyi Yang, Chenxi Liu, and Yinhai Wang. "Zero-Shot Learning–Based Cyclists Detection Through Surveillance Systems." Presented by **Sruangsaeng Chaikasetsin** at the 104th Annual Meeting of Transportation Research Board, Jan. 2025.
41. Yu, Peter and Yinhai Wang. "Performance Effects of the Dynamic Reversible Contraflow Median U-Turn Intersection Design." Presented by **Peter Yu** at the 104th Annual Meeting of Transportation Research Board, Jan. 2025.
42. Zhang, Shucheng, Chenxi Liu, Nutvara Jantarathaneewat, and Yinhai Wang. "An Automatic Traffic Sign Assessment System Using Deep Learning on Road Log Videos." Presented by **Shucheng Zhang** at the 104th Annual Meeting of Transportation Research Board, Jan. 2025.
43. Nasri, Mehrdad, Shuyi Yin, Yinhai Wang, and Venky Shankar. "Leveraging Image Semantic Segmentation for Road Infrastructure Localization in Traffic Safety Applications." Presented by **Mehrdad Nasri** at the 104th Annual Meeting of Transportation Research Board, Jan. 2025.
44. Karim, Mohammad Monjurul, Bingzhang Wang, and Yinhai Wang. "Thermal-Forecast: Traffic Trajectory Prediction in Challenging Nighttime Conditions Using Thermal Imaging." Presented by **Muhammad Monjurul Karim** at the 104th Annual Meeting of Transportation Research Board, Jan. 2025.

45. Shi, Yan, Chenxi Liu, and Yinhai Wang. "Attention Empowered Generative Adversarial Network for Lens Satin Removal and Image." Presented by **Yan Shi** at the 104th Annual Meeting of Transportation Research Board, Jan. 2025.
46. Wang, Bingzhang, Zhiyu Cai, Muhammad Monjurul Karim, Chenxi Liu, and Yinhai Wang. "Traffic Performance GPT (TP-GPT): Real-Time Data Informed Intelligent ChatBot for Transportation Surveillance and Management." Presented by **Bingzhang Wang** at 27th IEEE International Conference on Intelligent Transportation Systems. Sept. 25, 2025.
47. Ren, Yilong, Yizhuo Chang, Zhiyong Cui, Xiao Chang, Han Jiang, Haiyang Yu, and Yinhai Wang. "ENB-RL: Multi-Agent Reinforcement Learning with Explicit Neighbourhood Backtracking for Cooperative Traffic Signal Control." Presented by **Zhiyong Cui** at TRC-30: 30TH ANNIVERSARY OF TRANSPORTATION RESEARCH PART C. September 2, 2024.
48. Nasri, Mehrdad and Yinhai Wang. "Developing a Vehicle Dynamic Model to Study Roadway and Vehicle Factors in Speed Profile Formation." Presented by **Mehrdad Nasri** at the 2024 ASCE International Conference on Transportation and Development. June 16, 2024.
49. Wang, Bingzhang, Muhammad Monjurul Karim, and Yinhai Wang. "Traffic Performance GPT (TP-GPT): Real-Time Data Informed Intelligent ChatBot for Transportation Surveillance and Management." Presented by **Bingzhang Wang** at the 2024 ASCE International Conference on Transportation and Development. June 16, 2024.
50. Yu, Peter and Yinhai Wang. "Operational Advantages of the One-Sided Displaced Partial Cloverleaf A4 Interchange Design". Presented by **Peter Yu** at the 2024 ASCE International Conference on Transportation and Development, June 16, 2024.
51. Chaikasetsin, Sruangsaeng, Chenxi Liu, Mehrdad Nasri, and Yinhai Wang. "Zero-shot Learning Based on Non-motorized Vehicles Perception Based on a Surveillance System". Presented by **Sruangsaeng Chaikasetsin** at the National Travel Monitoring Exposition and Conference, June 3, 2024.
52. Zhang, Shucheng, Chenxi Liu, Nutvara Jantarathaneewat, and Yinhai Wang. "Automated Traffic Sign Condition Assessment Using Computer Vision and Deep Learning." Presented by **Shucheng Zhang** at the National Travel Monitoring Exposition and Conference, June 3, 2024.
53. Jantarathaneewat, Nutvara, Preecha Soparat, Theeraruk Maneenart, Phisan Santitamnont, and Yinhai Wang. "Development of a Prototype of a Mobile Mapping System for Road Asset Data Collection and Evaluation of the Rural Road Network". Presented by **Nutvara Jantarathaneewat** at the National Travel Monitoring Exposition and Conference, June 3, 2024.
54. Jantarathaneewat, Nutvara, Hao Yang, Karthik Murthy, and Yinhai Wang. "Smart and Cooperative Truck Parking Monitoring and Calibration System Empowered by Machine Learning". Presented by **Nutvara Jantarathaneewat** at the National Travel Monitoring Exposition and Conference, June 3, 2024.
55. Ling, Yifan, Yifan Zhuang, and Yinhai Wang. "An Innovative Avalanche Monitoring System for Roadways in Avalanche-Threatened Areas." Presented by **Yifan Ling** at the 103rd Annual Meeting of Transportation Research Board, Jan. 2024.
56. Tsai, Meng-Ju, Chenxi Liu, Hao Yang, Xuan Jiang, Meixing Zhu, and Yinhai Wang. "Unified Framework for Multi-Contrastive Learning in Spatial-Temporal Traffic Forecasting." Presented by **Chenxi Liu** at the 103rd Annual Meeting of Transportation Research Board, Jan. 2024.
57. Yin, Shuyi, Ruimin Ke, Chenxi Liu, Zhiyong Cui, Rohan Shrestha, and Yinhai Wang. "Automated Road Infrastructure Safety Assessments with Emerging Data Sources: A Survey." Presented by **Shuyi Yin** at the 103rd Annual Meeting of Transportation Research Board, Jan. 2024.
58. Jantarathaneewat, Nutvara, Chenxi Liu, Hao Yang, Yangjiao Chen, Meng-Ju Tsai, and Yinhai Wang. "Advancing Automatic Asset Management: An Innovative System for Traffic Sign Detection

and Recognition with Monocular Camera." Presented by **Nutvara Jantarathaneewat** at the 103rd Annual Meeting of Transportation Research Board, Jan. 2024.

59. Yang, Hao, Chenxi Liu, Bingzhang Wang, Meng-Ju Tsai, Ziyuan Pu, and Yinhai Wang. "Trustworthy Cost-Effective Vehicle Recognition System Empowered by Micro-Pulse LiDAR and Edge Artificial Intelligence." Presented by **Hao Yang** at the 103rd Annual Meeting of Transportation Research Board, Jan. 2024.
60. Karim, Muhammad Monjurul, Ruwen Qin, and Yinhai Wang. "The Fusion-Gated Recurrent Unit Network: A Deep Learning Model for Future Bounding Box Prediction of Traffic Agents in Risky Driving Videos." Presented by **Muhammad Monjurul Karim** at the 103rd Annual Meeting of Transportation Research Board, Jan. 2024.
61. Yang, Hao, Chenxi Liu, Meixin Zhu, Ruimin Ke, and Yinhai Wang. "Mitigating the Bias for Traffic Visual Perception Systems Empowered by Learning Few-Shot Representations." Presented by **Hao Yang** at the 103rd Annual Meeting of Transportation Research Board, Jan. 2024.
62. Ricord, Samuel, Ollie Wiesner, HollyAnna Littlebull, and Yinhai Wang. "Identifying Demographics of Collisions in American Indian and Alaska Native Communities." Presented by **Samuel Ricord** at the 103rd Annual Meeting of Transportation Research Board, Jan. 2024.
63. Chen, Xianda, Kehua Chen, Meixin Zhu, Xuesong Wang, Yinhai Wang, and Hao Yang. "MetaFollower: Adaptable Personalized Autonomous Car Following." Presented by **Xianda Chen** at the 103rd Annual Meeting of Transportation Research Board, Jan. 2024.
64. Wang, Pengqin, Meixin Zhu, Hui Zhong, Xianda Chen, Shaojie Shen, Xuesong Wang, and Yinhai Wang. "BEVGPT: Generative Pre-Trained Transformer for Autonomous Driving Prediction, Decision Making, and Planning." Presented by **Pengqin Wang** at the 103rd Annual Meeting of Transportation Research Board, Jan. 2024.
65. Liu, Chenxi, Lingjiu Lu, Yiran Zhang, Hao Yang, Meixin Zhu, and Yinhai Wang. "Single Monocular Camera System for Road Visibility Measurement: A Dark Channel Prior-Based Approach." Presented by **Chenxi Liu** at the 103rd Annual Meeting of Transportation Research Board, Jan. 2024.
66. Ricord, Samuel, Yinsheng Kou, Yinhai Wang, and Angela Kitali. "Quantifying Demographic Profiles for Washington Tolling Facilities." Presented by **Samuel Ricord** at the 103rd Annual Meeting of Transportation Research Board, Jan. 2024.
67. Ren, Yining, Zhizhou Wu, Yinhai Wang, and Yunyi Liang. "Few-Shot Accurate Recognization of Vehicle Lane-Changing Intention in Connected Vehicle Environment: A Meta-Transformer Approach." Presented by **Yining Ren** at the 103rd Annual Meeting of Transportation Research Board, Jan. 2024.
68. Guo, Jiuxia, Zongxin Yang, Yang Li, and Yinhai Wang. "Transportation Network Vulnerability Enhancement Study." Presented by **Chenxi Liu** at the 2023 ASCE International Conference on Transportation and Development (ICTD). June 2023. Austin, TX, USA.
69. Liu, Chenxi, Hao Yang, Men-ju Tsai, Samuel Ricord, and Yinhai Wang. "3D Structural Information Sensing System (3D-SISS) based on Single Monocular Surveillance Camera for Fully-automatic Traffic Scene Perception." Presented by **Chenxi Liu** at the 2023 ASCE International Conference on Transportation and Development (ICTD). June 2023. Austin, TX, USA.
70. Wang, Julia, Chenxi Liu, Sophie Tien, and Yinhai Wang. "Crowd Density Detection." Presented by **Chenxi Liu** at the 2023 ASCE International Conference on Transportation and Development (ICTD). June 2023. Austin, TX, USA.
71. Ricord, Samuel and Yinhai Wang. "Investigating Equity Biases in Transportation Data: A Literature Review Synthesis." Presented by **Samuel Ricord** at the 2023 ASCE International Conference on Transportation and Development (ICTD). June 2023. Austin, TX, USA.

72. Yang, Hao, Chenxi Liu, *Yifan* Ling, Cole Kopca, Samuel Ricord, and Yinhai Wang. "Cooperative Traffic Signal Assistance System for Non-motorized Users and Disabilities Empowered by Computer Vision and Edge Artificial Intelligence." Presented by **Hao Yang** at the 2023 ASCE International Conference on Transportation and Development (ICTD). June 2023. Austin, TX, USA.
73. Ricord, Samuel, Coke Kopca, Hao Yang, and Yinhai Wang. "Estimating a Demographic Profile for the Central Puget Sound Region Freeway Network." Presented by **Samuel Ricord** at the 2023 ASCE International Conference on Transportation and Development (ICTD). June 2023. Austin, TX, USA.
74. Guo, Jiuxia, Jinyu Tian, Ye Wei, Yingjie Jia, and Yinhai Wang. "Research on Hotspot Recognition of Multi-runway Airport Based on Complex Network." Presented by **Chenxi Liu** at the 2023 ASCE International Conference on Transportation and Development (ICTD). June 2023. Austin, TX, USA.
75. Yang, Hao, Xuan Jiang, Chenxi Liu, Shuyi Yin, and Yinhai Wang. "Enhancing-Minority Vehicle Classification System Empowered by Micro-Pulse LiDAR and Edge Artificial Intelligence." Presented by **Hao Yang** at the 2023 ASCE International Conference on Transportation and Development (ICTD). June 2023. Austin, TX, USA.
76. Hao Yang, Chenxi Liu, Yifan Ling, Cole Kopca, Samuel Ricord, and Yinhai Wang. "Cooperative Traffic Signal Assistance System for Non-Motorized Users and Disabilities Empowered by Computer Vision and Edge Artificial Intelligence." Presented by **Hao Yang** at the 102nd Annual Meeting of Transportation Research Board, Jan. 2023.
77. Yin, Shuyi, Luke Fischer, Yinhai Wang, and Jerome Lutin. "The Business Case for Transit Bus Automated Collision Avoidance Systems." Presented by **Jerome Luton and Shuyi Yin** at the 102nd Annual Meeting of Transportation Research Board, Jan. 2023.
78. Yin, Shuyi, Luke Fischer, Yinhai Wang, and Jerome Lutin. "Operational Effects of the One-Sided Displaced Partial Cloverleaf A4 Interchange Design." Presented by **Peter Yu** at the 102nd Annual Meeting of Transportation Research Board, Jan. 2023.
79. Zhuang, Yifan, Ziyuan Pu, Hao Yang, and Yinhai Wang. "Few Shot Learning for Novel Object Detection in Autonomous Driving." Presented by **Hao Yang** at the 102nd Annual Meeting of Transportation Research Board, Jan. 2023.
80. Yang, Hao, Chenxi Liu, Meixin Zhu, Yifan Zhuang, Meng-Ju Tsai, and Yinhai Wang. "Cooperative Perception and Interaction Smart Node for Non-Motorized Users and Disabilities Empowered by Edge Ensemble Learning." Presented by **Hao Yang** at the 102nd Annual Meeting of Transportation Research Board, Jan. 2023.
81. Lutin, Jerome, Ruimin Ke, Zhiyong Cui, Shuyi Yin, Yifan Zhuang, Hao Yang, and Yinhai Wang. "Transit Safety System Evaluation and Hot Spot Identification Empowered by Edge Computing Transit Event Logging System." Presented by **Jerome Lutin and Ruimin Ke** at the 102nd Annual Meeting of Transportation Research Board, Jan. 2023.
82. Liu, Chenxi, Hao Yang, Ruimin Ke, Wei Sun, Julia Wang, and Yinhai Wang. "Cooperative and Comprehensive Multi-Task Surveillance Sensing and Interaction System Empowered by Edge Artificial Intelligence." Presented by **Chenxi Liu** at the 102nd Annual Meeting of Transportation Research Board, Jan. 2023 (AED30 Best Paper Award).
83. Zhu, Meixin, Hao Yang, Chenxi Liu, and Yinhai Wang. "Multi-Agent Deep Reinforcement Learning for Network-Wide Traffic Signal Control." Presented by **Meixin Zhu** at the 102nd Annual Meeting of Transportation Research Board, Jan. 2023.
84. Liu, Chenxi, Hao Yang, Meixin Zhu, Cole Kopca, and Yinhai Wang. "Edge-Based, Automatic Real-Time Road Surface Condition Monitoring System Based on Single Monocular Surveillance Camera." Presented by **Chenxi Liu** at the 102nd Annual Meeting of Transportation Research Board, Jan. 2023.

85. Yang, Hao, Wenqing Zheng, Jiarui Cai, Peihao Wang, Xuan Jiang, Simon Du, Zhangyang Wang, and Yinhai Wang. "Integrating the Traffic Science with Deep Leaning for City-Wide Network Congestion Prediction." Presented by **Hao Yang** at the 102nd Annual Meeting of Transportation Research Board, Jan. 2023.
86. Tsai, Meng-Ju, Zhiyong Cui, Chenxi Liu, Hao Yang, and Yinhai Wang. "An Incremental Learning-based Framework for Non-stationary Traffic Representations Clustering and Forecasting." Presented by **Meng-Ju Tsai** at the IEEE International Intelligent Transportation Systems Conference. Oct. 2022, Macau, China.
87. Yin, Shuyi, Zhiyong Cui, and Yinhai Wang. "Reinforcement Learning for Curbside Space Management with Infrastructure Autonomy and Mixed Vehicle Connectivity." Presented by **Shuyi Yin** at the IEEE International Intelligent Transportation Systems Conference. Oct. 2022, Macau, China.
88. Liu, Chenxi, Torgeir Vaa, Levin Tomas, and Yinhai Wang. "A Novel RCNN Based Multi-camera Vehicle Reidentification in Surveillance System." Presented by **Chenxi Liu** at the 2022 ASCE International Conference on Transportation and Development (ICTD). June 2022. Seattle, USA.
89. Yu, Peter and Yinhai Wang. "Design and Operational Performance of the One-sided Diverging Diamond Interchange." Presented by **Peter Yu** at the 2022 ASCE International Conference on Transportation and Development (ICTD). June 2022. Seattle, USA.
90. Guo, Jiuxia, Yingjie Jia, and Yinhai Wang. "Research on Hazard Analysis Method of Apron Operation Management System Based on System Dynamics." Presented by **Chenxi Liu** at the 2022 ASCE International Conference on Transportation and Development (ICTD). June 2022. Seattle, USA.
91. Yang, Hao, Yifan Ling, Yifan Zhuang, and Yinhai Wang. "Towards Equal Traffic Signal Services for Non-motorized Users and Disabilities in Connected Vehicle Environment by Edge Computing." Presented by **Hao Yang** at the 2022 ASCE International Conference on Transportation and Development (ICTD). June 2022. Seattle, USA.
92. Yang, Hao, Chenxi Liu, Meixin Zhu, Ruimin Ke, and Yinhai Wang. "RISTS: Real-time Iot System for Traffic Sensing by Edge Computing and Multi-camera Vehicle Re-identification." Presented by **Hao Yang** at the 2022 ASCE International Conference on Transportation and Development (ICTD). June 2022. Seattle, USA.
93. Liu, Chenxi, Torgeir Vaa, Yinhai Wang, Ruimin Ke, Lingran Meng, and Luyang Gong. "Edge-based Automatic Real-time Road Surface Condition Monitoring System (RSCMS) Based on Single Monocular Surveillance Camera." Presented by **Chenxi Liu** at the 2022 ASCE International Conference on Transportation and Development (ICTD). June 2022. Seattle, USA.
94. Yin, Shuyi and Yinhai Wang. "Decomposing Metro-Bus Transfer Time with Smart Card Data." Presented by **Shuyi Yin** at the 2022 ASCE International Conference on Transportation and Development (ICTD). June 2022. Seattle, USA.
95. Ricord, Sam, Yinhai Wang, and Meixin Zhu. "Impact of Homeless Encampments on Roadway Safety DOT Policy: Summary of Findings from Current Data Sources." Presented by **Sam Ricord** at the 2022 ASCE International Conference on Transportation and Development (ICTD). June 2022. Seattle, USA.
96. Kopca, Cole, Don MacKenzie, John Ash, and Yinhai Wang. "Impacts of COVID-19 and Ensuing Government-defined Restrictions on Daily Trips of Five Mobility Services." Presented by **Cole Kopca** at the 2022 ASCE International Conference on Transportation and Development (ICTD). June 2022. Seattle, USA.
97. Liu, Chenxi, Torgeir Vaa, Yinhai Wang, Ruimin Ke, Lingran Meng, and Luyang Gong. "Edge-based Automatic Real-time Road Surface Condition Monitoring System (RSCMS) Based on Single

Monocular Surveillance Camera." Presented by **Chenxi Liu** at the 2022 ASCE International Conference on Transportation and Development (ICTD). June 2022. Seattle, USA.

98. Jiang, Xuan, Hao Yang, and Yinhai Wang. "Making Sense of Electrical Vehicle Discussions Using Sentiment Analysis on Closely Related News and User Comments." Presented by **Xuan Jiang** at the 2022 ASCE International Conference on Transportation and Development (ICTD). June 2022. Seattle, USA.
99. Guo, Jiuxia, Zongxin Yang, and Yinhai Wang. "Resilience of Multi-layer Network Sysem Under Multi-event Disturbance." Presented by **Chenxi Liu** at the 2022 ASCE International Conference on Transportation and Development (ICTD). June 2022. Seattle, USA.
100. Zhu, Meixin, Hao Yang, Zhiyong Cui, and Yinhai Wang. "Traffic Sign Detection and Recognition for Autonomous Driving in Virtual Simulation Environment." Presented by **Meixin Zhu** at the 2022 ASCE International Conference on Transportation and Development (ICTD). June 2022. Seattle, USA.
101. Zhu, Meixin, Xuesong Wang, Hao Yang, and Yinhai Wang. "Transfollower: Long Sequence Car-following Trajectory Prediction Through Transformer." Presented by **Meixin Zhu** at the 2022 ASCE International Conference on Transportation and Development (ICTD). June 2022. Seattle, USA.
102. Ash, John, Adekunle Adebisi, and Yinhai Wang. "Real-time Crash Detection Based on Large-scale GPS Probe Data." Presented by **John Ash** at the 2022 ASCE International Conference on Transportation and Development (ICTD). June 2022. Seattle, USA.
103. Tsai, Meng-Ju, Hsiu-Yuan Chen, Zhiyong Cui, and Yinhai Wang. "Multivariate Long And Short Term LSTM-Based Network for Traffic Forecasting Under Interference: Experiments During COVID-19." Presented by **Meng-Ju Tsai** at the 101st Annual Meeting of Transportation Research Board, Jan. 2022.
104. Maia De Souza, Cesar, Sam Ricord, Wei Sun, and Yinhai Wang. "Assessing Pedestrian Safety on Roads through Machine Learning Approaches." Presented by **Cesar Maia De Souza** at the 101st Annual Meeting of Transportation Research Board, Jan. 2022.
105. Yang, Hao, Chenxi Liu, Ruimin Ke, Meixin Zhu, and Yinhai Wang. "RISTS: Real-time IoT System for Traffic Sensing by Edge Computing and Multi-camera Vehicle Re-identification." Presented by **Hao Yang** at the 101st Annual Meeting of Transportation Research Board, Jan. 2022.
106. Yang, Hao, Meng-Ju Tsai, Chenxi Liu, and Yinhai Wang. "Equality-aware Cost-effective Vehicle Classification System by Compact Pulse LiDAR and Edge Artificial Intelligence." Presented by **Hao Yang** at the 101st Annual Meeting of Transportation Research Board, Jan. 2022.
107. Ke, Ruimin, Chenxi Liu, Ziyuan Pu, Hao Yang, Yifan Zhuang, and Yinhai Wang. "Multi-Task System for Real-Time Surveillance of Road and Traffic with Edge Artificial Intelligence." Presented by **Ruimin Ke** at the 101st Annual Meeting of Transportation Research Board, Jan. 2022.
108. Yan, Zhangcun, Qiyuan Liu, Guopeng Zhang, Yinhai Wang, and Jian Sun. "Investigating the Saturation Flow Rate of Approach Lanes at "X" Shaped Working Zone of the Signalized Intersection." Presented by **Zhangcun Yan** at the 101st Annual Meeting of Transportation Research Board, Jan. 2022.
109. Liu, Chenxi, Hao Yang, Zhiyong Cui, Wei Sun, and Yinhai Wang. "3D Structural Information Sensing System (3D-SISS) based on Car Keypoints Detection with Single Monocular Surveillance Camera." Presented by **Chenxi Liu** at the 101st Annual Meeting of Transportation Research Board, Jan. 2022.
110. Yin, Shuyi, Zhiyong Cui, and Yinhai Wang. "Reinforcement Learning for Curbside Space Management with Infrastructure Autonomy and Mixed Vehicle Connectivity." Presented by **Shuyi Yin** at the 101st Annual Meeting of Transportation Research Board, Jan. 2022.

111. Liang, Yunyi, Meixin Zhu, Zhizhou Wu, and Yinhai Wang. "Actor Critic Reinforcement Learning for Ecological Cooperative Adaptive Cruise Control." Presented by **Yunyi Liang** at the 101st Annual Meeting of Transportation Research Board, Jan. 2022.
112. Yang, Hao, Yifang Ling, Yifan Zhuang, and Yinhai Wang. "Connected, Equal and Automated Signal Phase and Timing (SPaT) Infrastructure System for Non-motorized Users and Disabilities by Edge Artificial Intelligen" Presented by **Hao Yang** at the 101st Annual Meeting of Transportation Research Board, Jan. 2022.
113. Yu, Peter and Yinhai Wang. "Operational Effects of the One-Sided Diverging Diamond Interchange Design" Presented by **Peter Yu** at the 101st Annual Meeting of Transportation Research Board, Jan. 2022.
114. Huang, Kairui, Samuel Ricord, and Yinhai Wang. "Evaluating Transit Inequity During COVID-19 Via Lorenz Curve and AHP-Entropy TOPSIS." Presented by **Samuel Ricord** at the 101st Annual Meeting of Transportation Research Board, Jan. 2022.
115. Zhou, Yang, Yuantao Zhang, Quan Yuan, Chao Yang, and Yinhai Wang. "The Smartphone-Based Person Travel Survey System: Data Collection, Trip Extraction, and Travel Mode Detection." Presented by **Yang Zhou** at the 101st Annual Meeting of Transportation Research Board, Jan. 2022.
116. Tsai, Meng-Ju, Hsiu-Yuan Chen, Zhiyong Cui, and Yinhai Wang. "Multivariate Long And Short Term LSTM-Based Network for Traffic Forecasting Under Interference: Experiments During COVID-19." Presented by **Meng-Ju Tsai** at the 2021 IEEE International Intelligent Transportation Systems Conference. Sept. 2021.
117. Liu, Chenxi, Hao Yang, Hsiu-Yuan Chen, and Yinhai Wang. "Bi-level Optimization Algorithm for Dynamic Reversible Lane Control based on Short-term Traffic Flow Prediction." Presented by **Chenxi Liu** at the 100th Annual Meeting of Transportation Research Board, Jan. 2021.
118. Zhou, Yang, Quan Yuan, Chao Yang, and Yinhai Wang. "Human Activity Patterns Clustering with a Markov-Chain-Based Mixture Model." Presented by **Yang Zhou** at the 100th Annual Meeting of Transportation Research Board, Jan. 2021.
119. Wang, Shuo, Ziyuan Pu, Qianxia Cao, Qianmu Li, and Yinhai Wang. "Lightweight Convolutional Neural Networks for Crowd Density Estimation." Presented by **Shuo Wang** at the 100th Annual Meeting of Transportation Research Board, Jan. 2021.
120. Cui, Zhiyong, Meixin Zhu, Shuo Wang, Pengfei Wang, Yang Zhou, Qianxia Cao, Cole Kopca, and Yinhai Wang. "Traffic Performance Score for Measuring the Impact of COVID-19 on Urban Mobility." Presented by **Zhiyong Cui** at the 100th Annual Meeting of Transportation Research Board, Jan. 2021.
121. Yang, Hao, Meixin Zhu, Ruimin Ke, Chenxi Liu, and Yinhai Wang. "Novel Network-Scale Traffic Sensing Approach Using Multi-camera Object Tracking and Re-Identification." Presented by **Hao Yang** at the 100th Annual Meeting of Transportation Research Board, Jan. 2021.
122. Ke, Ruimin, Zhiyong Cui, Yanlong Chen, Meixin Zhu, and Yinhai Wang. "IoT System for Real-Time Near-Crash Detection for Automated Vehicle Testing." Presented by **Ruimin Ke** at the 100th Annual Meeting of Transportation Research Board, Jan. 2021.
123. Lutin, Jerome, Heidi Soule, Adam Davis, Andrew Krum, Yinhai Wang, Ruimin Ke, Dave Valadez, Dan Sellers, Steve Roberts, and Luke Fischer. "Risk Mitigation Planning for Revenue Service Testing of Bus Automated Emergency Braking." Presented by **Jerome Lutin** at the 100th Annual Meeting of Transportation Research Board, Jan. 2021.

124. Zhuang, Yifan, Ziyuan Pu, Hao Yang, and Yinhai Wang. "Quantized Convolutional Neural Network for Edge-based Parking Surveillance." Presented by **Yifan Zhuang** at the 100th Annual Meeting of Transportation Research Board, Jan. 2021.
125. Yang, Hao, Chenxi Liu, Yifan Zhuang, Wei Sun, and Yinhai Wang. "Truck Parking Pattern Aggregation and Real-time Availability Prediction by Multi-task Learning." Presented by **Hao Yang** at the 100th Annual Meeting of Transportation Research Board, Jan. 2021.
126. Pu, Ziyuan, Zhiyong Cui, Shuo Wang, Hao Yang, and Yinhai Wang. "Multi-Modal Traffic Speed Monitoring: A Real-Time System Based on Passive Wi-Fi and Bluetooth Sensing Technology." Presented by **Ziyuan Pu** at the 100th Annual Meeting of Transportation Research Board, Jan. 2021.
127. Yang, Hao, Ruimin Ke, and Yinhai Wang. "Multi-camera Re-Identification System (McCris) for Transportation Applications." Demonstrated by **Hao Yang and Ruimin Ke** at the 2020 Consumer Electronic Show (CES), Las Vegas, Jan. 2020.
128. Heidi, Soule, Skip Huck, Andrew Krum, Yinhai Wang, Ruimin Ke, Dave Valadez, Dan Sellers, and Jerome Lutin. "How We Are Testing an Automated Collision Avoidance and Emergency Braking System for Buses and What We Have Learned So Far." Presented by **Jerome Lutin** at the 99th Annual Meeting of Transportation Research Board, Jan. 2020.
129. Pu, Ziyuan, Xiaoyu Guo, Zhiyong Cui, Meixin Zhu, and Yinhai Wang. "Mining Public Transit Ridership Flow and Origin-Destination Information from Wi-Fi and Bluetooth Sensing Data." Presented by **Ziyuan Pu** at the 99th Annual Meeting of Transportation Research Board, Jan. 2020.
130. Cui, Zhiyong, Longfei Lin, Ziyuan Pu, and Yinhai Wang. "Graph Markov Network for Traffic Forecasting with Missing Data." Presented by **Zhiyong Cui** at the 99th Annual Meeting of Transportation Research Board, Jan. 2020.
131. Ke, Ruimin, Yifan Zhuang, Ziyuan Pu, and Yinhai Wang. "A Smart, Efficient, and Reliable Parking Surveillance System with Edge Artificial Intelligence on IoT Devices." Presented by **Ruimin Ke** at the 99th Annual Meeting of Transportation Research Board, Jan. 2020.
132. Ke, Ruimin, Wan Li, Zhiyong Cui, and Yinhai Wang. "Two-Stream Multi-Channel Convolutional Neural Network for Multi-Lane Traffic Speed Prediction Considering Traffic Volume Impact." Presented by **Ruimin Ke** at the 99th Annual Meeting of Transportation Research Board, Jan. 2020.
133. Cui, Zhiyong, Mingjian Fu, Meixin Zhu, Xuegang Ban, and Yinhai Wang. "Transportation Artificial Intelligence Platform for Traffic Forecasting." Presented by **Zhiyong Cui** at the 99th Annual Meeting of Transportation Research Board, Jan. 2020.
134. Liu, Chenxi, Hao Yang, Pengpen Xu, Xin Fu, and Yinhai Wang. "Advanced Multidimensional Sequence Alignment Method for Activity-Based Travel Pattern Similarity Identification." Presented by **Chenxi Liu** at the 99th Annual Meeting of Transportation Research Board, Jan. 2020.
135. Ash, John, Cole Kopca, Yinhai Wang, and Salvatore Antonio Biancardo. "A Data-Driven Methodology for Estimating Per-Lane, Free-Flow Speed for Freeways." Presented by **John Ash** at the 99th Annual Meeting of Transportation Research Board, Jan. 2020.
136. Chen, Xi, Yinhai Wang, Jinjun Tang, Zhuang Dai, and Xiaole Ma. "Examining Regional Mobility Patterns of Public Transit and Automobile Users Based on Smartcard and Mobile Internet Data." Presented by **Xi Chen** at the 99th Annual Meeting of Transportation Research Board, Jan. 2020.
137. Zhu, Meixin, Yinhai Wang, and Xuesong Wang. "Differences in Freeway Car Following: Empirical Findings from Naturalistic Driving Studies in Shanghai and Ann Arbor." Presented by **Meixin Zhu** at the 99th Annual Meeting of Transportation Research Board, Jan. 2020.
138. Yang, Hang, Zhongyu Wang, Yajie Zou, Bing Wu, and Yinhai Wang. "Dynamic Signal Control and Route Choice Equilibrium on Mixed Networks: A Modified Stackelberg Games Approach."

Presented by **Zhongyu Wang** at the 99th Annual Meeting of Transportation Research Board, Jan. 2020.

139. Pu, Ziyuan, Bing Han, Yinhai Wang, and Jiangang Xu. "Using Random Forests to Explore the Non-Linear Correlation Between Highway Vertical Curve Features and Crash Frequency." Presented by **Ziyuan Pu** at the 2019 ASCE International Conference on Transportation and Development. Alexandria, Virginia, June 9-12, 2019.
140. Zhu, Meixin and Yinhai Wang. "Multi-Objective Longitudinal Velocity Control for Autonomous Driving." Presented by **Meixin Zhu** at the 2019 ASCE International Conference on Transportation and Development. Alexandria, Virginia, June 9-12, 2019.
141. Jiang, Ying, Yinhai Wang, Junyi Zhang, Zhiyong Cui, and Ruimin Ke. "Human factors in naturalistic driving: an integrated research on driver's affective experience, avoidance behavior and speed control performances." Presented by **Ying Jiang** at the 2019 ASCE International Conference on Transportation and Development. Alexandria, Virginia, June 9-12, 2019.
142. Kopca, Cole and Yinhai Wang. "PacTrans Innovations in Mobility and Safety Technologies." Presented by **Cole Kopca** at the 2019 UTC Spotlight Conference, Washington D.C., May 14, 2019.
143. Binjolkar, Mayuree, Ken Perrine, and Yinhai Wang. "Development of a National Speed Limit Database." Presented by **Mayuree Binjolkar** at AASHTO 2019 GIS-T Symposium. Championsgate, Florida, April 23, 2019.
144. Cui, Zhiyong, Kristian Henrickson, Ziyuan Pu, Ge Guo, and Yinhai Wang. "A New Multi-Source Traffic Data Integration Framework for Traffic Analysis and Performance Measurement." Presented by **Zhiyong Cui** at the 98th Annual Meeting of Transportation Research Board, Jan. 2019.
145. Zou, Ziyao, Weibin Zhang, Yong Qi, and Yinhai Wang. "A Multi-Ship Following Model for Icebreaker Escort Operations in the Baltic Sea." Presented by **Ziyao Zou** at the 98th Annual Meeting of Transportation Research Board, Jan. 2019.
146. Ke, Ruimin, Shuo Feng, Zhiyong Cui, and Yinhai Wang. "An Advanced Framework for Traffic Parameters Estimation from UAV Video." Presented by **Ruimin Ke** at the 98th Annual Meeting of Transportation Research Board, Jan. 2019.
147. Zhuang, Yifan, Ruimin Ke, and Yinhai Wang. "A New Method for Traffic Flow Data Collection Using Onboard Monocular Camera." Presented by **Yifan Zhuang** at the 98th Annual Meeting of Transportation Research Board, Jan. 2019.
148. Li, Qianmu, Yinhai Wang, Ying Jiang, Jun Hou, and Yong Qi. "A Network-Load Interaction Instruction Abnormal Detection Method of Electric Vehicles Networks." Presented by **Ying Jiang** at the 98th Annual Meeting of Transportation Research Board, Jan. 2019.
149. Li, Qianmu, Yinhai Wang, Ziyuan Pu, Zichen Zhang, and Weibin Zhang. "A Time Series Association State Analysis Method in Smart Internet of Electric Vehicle Charging Network Attack." Presented by **Ziyuan Pu** at the 98th Annual Meeting of Transportation Research Board, Jan. 2019.
150. Pu, Ziyuan, Xiaoyu Guo, Zhibin Li, Ying Jiang, and Yinhai Wang. "Before–After Analysis of Safety Effects of Variable Speed Limit System Using Full Bayesian Models." Presented by **Ziyuan Pu** at the 98th Annual Meeting of Transportation Research Board, Jan. 2019.
151. Wang, Zhongyu, Wenya He, Xi Zhang, Yanli Wang, Bing Wu, and Yinhai Wang. "Exploring Lane-Based Vehicular Speed Characteristics in Freeway Work Zones with Drone Video." Presented by **Zhongyu Wang** at the 98th Annual Meeting of Transportation Research Board, Jan. 2019.
152. Ash, John, Kristian Henrickson, and Yinhai Wang. "A Data-Driven Approach for Estimation of Passenger Car Equivalents on Basic Freeway Segments Operating at

Capacity." Presented by **John Ash** at the 98th Annual Meeting of Transportation Research Board, Jan. 2019.

153. Wang, Zhongyu, Yufang Bai, Rui Zhu, Yanli Wang, Bing Wu, and Yinhai Wang. "Impact Analysis of Extra Traffic Induced by Project Construction During Planned Special Events." Presented by **Zhongyu Wang** at the 98th Annual Meeting of Transportation Research Board, Jan. 2019.
154. Feng, Shumin, Jinyang Li, Hu Zhao, Mengwei Xin, and Yinhai Wang. "A New Cellular Automaton Model for Partnering Platoon on Free Way: Characteristics of Platoon and Its Impact on Traffic Flow." Presented by **Jinyang Li** at the 98th Annual Meeting of Transportation Research Board, Jan. 2019.
155. Jiang, Ying, Junyi Zhang, Yinhai Wang, Chenglong Liu, and Ziyuan Pu. "Capturing Young People's Ownership Behavior of Autonomous Vehicles Based on an Comparative Analysis in Japan." Presented by **Ying Jiang** at the 98th Annual Meeting of Transportation Research Board, Jan. 2019.
156. Cui, Zhiyong, Kristian Henrickson, Ruimin Ke, Xiao Dong, and Yinhai Wang. "High-Order Graph Convolutional Recurrent Neural Network: A Deep Learning Framework for Network-Scale Traffic Learning and Forecasting." Presented by **Zhiyong Cui** at the 98th Annual Meeting of Transportation Research Board, Jan. 2019.
157. Yang, Hao, Chenxi Liu, Christopher Gottsacker, Xuegang Ban, Chao Zhang, and Yinhai Wang. "Cell-Speed Prediction Neural-Network: A Deep-Learning Approach for Trip Cell Speed Prediction in Metropolitan Road Networks." Presented by **Hao Yang** at the 98th Annual Meeting of Transportation Research Board, Jan. 2019.
158. Pu, Ziyuan, Chenglong Liu, Yinhai Wang, Xianming Shi, and Chao Zhang. "Road Surface Condition Prediction Using Long Short-Term Memory Neural Network Based on Historical Data." Presented by **Ziyuan Pu** at the 98th Annual Meeting of Transportation Research Board, Jan. 2019.
159. Liang, Yunyi, and Yinhai Wang. "Data-Driven Road Side Unit Location for Connected and Autonomous Vehicle–Based Intersection Control." Presented by **Yunyi Liang** at the 98th Annual Meeting of Transportation Research Board, Jan. 2019.
160. Liu, Chenglong, Fuwen Deng, Ying Jiang, Ziyuan Pu, Yuchan Du, and Yinhai Wang. "View Independent Vehicle Model Recognition Using Semantic Segmentation and Image Retrieval." Presented by **Chenglong Liu** at the 98th Annual Meeting of Transportation Research Board, Jan. 2019.
161. Chen, Xi, Xiaolei Ma, and Yinhai Wang. "A Data-Driven Customized Bus Line Design Model based on Multi-Source Data." Presented by **Xi Chen** at the 2018 ASCE International Conference on Transportation and Development. July 15-18, 2018, Pittsburgh, PA.
162. Zhang, Chen, Jie He, Rui Qiu, and Yinhai Wang. "A deep learning method used in traffic environmental impact analysis at toll collection plaza in China." Presented by **Chen Zhang** at the 2018 ASCE International Conference on Transportation and Development, Pittsburgh, PA, July 15-18, 2018.
163. Zeng, Ziqiang, Huimiao Chen, and Yinhai Wang. "A Framework of a V2X Communication System with Novel Technologies for Enhancing Vehicle and Pedestrian Safety." Presented by **Ziqiang Zeng** at the 2018 ASCE International Conference on Transportation and Development, Pittsburgh, PA, July 15-18, 2018.
164. Nan, Qiuming and Yinhai Wang. "A Line-shape Measurement Method of Bridge Structure Based on Fiber Optic Gyroscope." Presented by **Qiuming Nan** at the 2018 ASCE International Conference on Transportation and Development, Pittsburgh, PA, July 15-18, 2018.

165. Ke, Ruimin, Yifan Zhuang, and Yinhai Wang. "A Multi-Sensor Solution for Large-Scale Parking Space Detection." Presented by **Ruimin Ke** at the 2018 ASCE International Conference on Transportation and Development, Pittsburgh, PA, July 15-18, 2018.
166. Guo, Ge and Yinhai Wang. "A Multi-Sensor Solution for Large-Scale Parking Space Detection." Presented by **Ge Guo** at the 2018 ASCE International Conference on Transportation and Development, Pittsburgh, PA, July 15-18, 2018.
167. Huang, Ling, Yinhai Wang, Jianping Wu, and Kai Lu. "Comparative Analysis & Modeling for Conflict Avoidance Behavior of E-Bikes and Bikes." Presented by **Ling Huang** at the 2018 ASCE International Conference on Transportation and Development, Pittsburgh, PA, July 15-18, 2018.
168. Qiu, Rui, Yinhai Wang, Ziqiang Zeng, and Meihui Li. "Data-driven pollution routing problem." Presented by **Rui Qiu** at the 2018 ASCE International Conference on Transportation and Development, Pittsburgh, PA, July 15-18, 2018.
169. Chen, Huimiao, Yinhai Wang, and Ziqiang Zceng. "Data-driven Analysis of Plug-in Electric Taxis Dispatching and Charging." Presented by **Ziqiang Zeng** at the 2018 ASCE International Conference on Transportation and Development, Pittsburgh, PA, July 15-18, 2018.
170. Liu, Dan and Yinhai Wang. "Data-driven Innovations in a Regional Freight Planning Model: Accounting for Heterogeneous Stakeholders' Preferences." Presented by **Dan Liu** at the 2018 ASCE International Conference on Transportation and Development, Pittsburgh, PA, July 15-18, 2018.
171. Liang, Yunyi, Mayuree Binjolkar, Zhiyong Cui, and Yinhai Wang. "Delay bound analysis for vehicular ad hoc networks at signalized intersections." Presented by **Yunyi Liang** at the 2018 ASCE International Conference on Transportation and Development, Pittsburgh, PA, July 15-18, 2018.
172. Ash, John, Yunyi Liang, Ziqiang Zeng, Yinhai Wang, and Ted Bailey. "Freeway Traffic Safety and Efficiency Enhancement through Adaptive Roadway Lighting and Control Enabled by Connected Sensor and Infrastructure Networks." Presented by **John Ash** at the 2018 ASCE International Conference on Transportation and Development, Pittsburgh, PA, July 15-18, 2018.
173. Zhu, Meixin, Xuesong Wang, and Yinhai Wang. "Human-Like Autonomous Car-Following Model by Deep Deterministic Policy Gradient Reinforcement Learning." Presented by **Meixin Zhu** at the 2018 ASCE International Conference on Transportation and Development, Pittsburgh, PA, July 15-18, 2018.
174. Jiang, Ying, Junyi Zhang, and Yinhai Wang. "In-vehicle Time Adaptations to Use of Autonomous Vehicles." Presented by **Ying Jiang** at the 2018 ASCE International Conference on Transportation and Development, Pittsburgh, PA, July 15-18, 2018.
175. Zhu, Mengtao, Yunjie Li, and Yinhai Wang. "Investigation of Driver Injury Severity Patterns in Run-Off-Road Crashes Using a Series of Artificial Neural Network Models." Presented by **Mengto Zhu** at the 2018 ASCE International Conference on Transportation and Development, Pittsburgh, PA, July 15-18, 2018.
176. Cui, Zhiyong, Band Sittikariya, Mingjian Fu, Adiam Emery, and Yinhai Wang. "Performance Measurement for a Selected Pilot Urban Corridor in Seattle." Presented by **Zhiyong Cui** at the 2018 ASCE International Conference on Transportation and Development, Pittsburgh, PA, July 15-18, 2018.
177. Lu, Kai, Guanrong Lin, Jianmin Xu, and Yinhai Wang. "Simultaneous Optimization Model of Signal Phase Design and Timing at Intersection." Presented by **Kai Lu** at the 2018 ASCE International Conference on Transportation and Development, Pittsburgh, PA, July 15-18, 2018.
178. Liu, Chenglong, Yishun Li, Cong Chao, Yinhai Wang, and Yuchuan Du. "The Application of Machine Vision in Skid Resistance Estimation." Presented by **Chenglong Liu** at the 2018 ASCE International Conference on Transportation and Development, Pittsburgh, PA, July 15-18, 2018.
179. Ma, Ning, Jiuping Xu, and Yinhai Wang. "The Locating and Capacitating Strategy of CNG Refueling Station towards the Uncertain Developing Market." Presented by Ning Ma at the 2018

ASCE International Conference on Transportation and Development, Pittsburgh, PA, July 15-18, 2018.

180. Li, Meihui, Jiuping Xu, and Yinhai Wang. "Transport biofuels technological paradigm based conversion approaches towards a bio-electric energy framework." Presented by **Meihui Li** at the 2018 ASCE International Conference on Transportation and Development, Pittsburgh, PA, July 15-18, 2018.
181. Sun, Feng, Li Sun, Yinhai Wang, Ronghan Yao, and Ziqiang Zeng. "Optimal Location of U-Turn at Signalized Intersections with Double Left-Turn Lanes." Presented by **Ziqiang Zeng** at the 97th Annual Meeting of Transportation Research Board, Jan. 2018.
182. Yang, Hang, Yajie Zou, Zhongyu Wang*, Bing Wu, and Yinhai Wang. "A Hybrid Method for Short-term Freeway Travel Time Prediction Based on Percentage Error Correction and Noise Extraction." Presented by **Hang Yang** at the 97th Annual Meeting of Transportation Research Board, Jan. 2018.
183. Yang, Xiaoxue, Yajie Zou, Lingtao Wu, and Yinhai Wang. "Modeling Animal-Vehicle Collisions using Empirical Bayes Method based on the Negative Binomial Models." Presented by **Xiaoxue Yang** at the 97th Annual Meeting of Transportation Research Board, Jan. 2018.
184. Zeng, Ziqiang, John Ash*, Ziyuan Pu*, Yifan Zhuang*, and Yinhai Wang. "A Framework of a V2X Communication System for Enhancing Vehicle and Pedestrian Safety at Un-signalized Intersections." Presented by **Ziqiang Zeng** at the 97th Annual Meeting of Transportation Research Board, Jan. 2018.
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186. Zhang, Weibin, Yong Qi, Zhuping Zhou, Salvatore Antonio Biancardo*, and Yinhai Wang. "A method of speed data fusion based on Bayesian combination algorithm and Markov model." Presented by **Weibin Zhang** at the 97th Annual Meeting of Transportation Research Board, Jan. 2018.
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195. Zhu*, Wenbo and Yinhai Wang. "Identifying Grade Effects on Network Speed Prediction." Presented by **Wenbo Zhu** at the 97th Annual Meeting of Transportation Research Board, Jan. 2018.
196. Lutin, Jerome, Jerry Spears, Yinhai Wang, Ruimin Ke, and Steven Clancy. "Testing Automated Collision Avoidance Warning Systems in Transit Bus Revenue Operations – Active Safety Collision Warning Pilot in Washington State." Presented by **Jerome Lutin** at the 97th Annual Meeting of Transportation Research Board, Jan. 2018.
197. Liang*, Yunyi, Zhiyong Cui*, Yu Tian, Huimiao Chen*, and Yinhai Wang. "A Deep Generative Adversarial Architecture for Network-wide Spatial-Temporal Traffic State Estimation." Presented by **Yunyi Liang** at the 97th Annual Meeting of Transportation Research Board, Jan. 2018.
198. Zhang, Weibin, Haifeng Guo, Ziqiang Zeng, Yong Qi, and Yinhai Wang. "Transportation Cloud Service Composition based on Fuzzy Programming and Genetic Algorithm." Presented by **Weibin Zhang** at the 97th Annual Meeting of Transportation Research Board, Jan. 2018.
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202. Ke*, Ruimin, Jerome Lutin, Jerry Spears, and Yinhai Wang. "A Cost-effective Framework for Automated Vehicle-pedestrian Near-miss Detection through Onboard Monocular Vision." Presented by **Ruimin Ke** at the 2017 IEEE Conference on Computer Vision and Pattern Recognition Workshops. Honolulu, Hawaii, July 21, 2017.
203. Zhang, Wenhui, Jing Dai, Ruimin Ke*, and Yinhai Wang. "Evaluating Influential Factors on the Duration of Vehicle Incidents that Result in Fires Using Gray Relational Analysis." Presented by Wenhui Zhang at the 17th COTA International Conference of Transportation Professionals (CICTP 2017). Shanghai, July 2017.
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205. Tang*, Jinjun, Ying Yan, Weibin Zhang, Zhibin Li, and Yinhai Wang. "Inferring Driving Trajectories based on Probabilistic Model from Large Scale Taxi GPS Data." Presented by **Jinjun Tang** at the 96th Annual Meeting of Transportation Research Board, Jan. 2017.
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207. Lutin, Jerome, Jerry Spears, Yinhai Wang, Benjamin Englander, and Steven Clancy. "Testing Transit Bus Collision Avoidance Warning Systems in Revenue Operations – Active Safety Collision Warning Pilot in Washington State." Presented by **Jerry Lutin** at the 96th Annual Meeting of Transportation Research Board, Jan. 2017.
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210. Xiong, Junfeng, Yunlu Li, Shen Zhang, Jinjun Tang*, and Yinhai Wang. "Vehicle Lane Change Detection based on Driving Recorder Video." Presented by **Shen Zhang** at the 96th Annual Meeting of Transportation Research Board, Jan. 2017.
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212. Li, Zhibin, Ziyuan Pu*, Wenbo Zhu*, and Yinhai Wang. "Evaluating the Correlation between Vertical Curve Features and Crash Rates on Highways." Presented by **Zhibin Li** at the 96th Annual Meeting of Transportation Research Board, Jan. 2017.
213. Dong, Honghui, Zhenyu Yang, Zhibin, Limin Jia, Yong Qin, and Yinhai Wang. "Understanding Spatial and Temporal Patterns of Urban Travel Demands with Call Detail Record Data." Presented by **Honghui Dong** at the 96th Annual Meeting of Transportation Research Board, Jan. 2017.
214. Cui*, Zhiyong, Shen Zhang, Kristian Henrickson*, and Yinhai Wang. "New Progress of DRIVE Net." Presented by **Yinhai Wang** at the IEEE Second International Smart Cities Conference. September 12-15 2016.
215. Liu, Jianfeng, Xiaolei Ma, and Yinhai Wang. "Temporal Distribution Analysis of Beijing Subway Ridership." Presented by **Jianfeng Liu** at the 16th COTA International Conference of Transportation Professionals (CICTP 2016). July 6-9, 2016.
216. Zhu*, Wenbo, Zhibin Li, and Yinhai Wang. "Capacity Modeling and Control Optimization for Two-lane Highway Lance Closure Work Zones." Presented by **Wenbo Zhu** at the International Symposium on Enhancing Highway Performance (ISEHP). June 14-16, 2016.
217. Chen*, Xianzhe, Yajie Zou, Benjamin Wright*, and Yinhai Wang. "Examining the Impact of Traffic Incidents on the Travel Time Variability of Freeway Managed Lanes." Presented by **Wenbo Zhu** at the International Symposium on Enhancing Highway Performance (ISEHP). June 14-16, 2016.
218. Henrickson*, Kristian and Yinhai Wang. "Implausible Ignorability: An Analysis of Factors Influencing Probe Vehicle Data Completeness." Presented by **Kristian Henrickson** at the 2016 North America Travel Monitoring Exposition and Conference, Miami, Florida, May 1 – 4, 2016.
219. Ma, Xiaolei, Yong Wang, Edward McCormack, and Yinhai Wang. "Understanding Freight Trip Chaining Behavior Using Spatial Data Mining Approach with GPS Data." Presented by **Xiaolei Ma** at the 95th Annual Meeting of Transportation Research Board, Jan. 2016.
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221. Ma, Xiaolei, Haiyang Yu, Yunpeng Wang, and Yinhai Wang. "Large-scale Transportation Network Congestion Evolution Prediction Using Deep Learning Theory" Presented by **Xiaolei Ma** at the 95th Annual Meeting of Transportation Research Board, Jan. 2016.
222. Wang, Yong, Xiaolei Ma. Zhibin Li, Matthew Dunlap, Maoze Xu, Yinhai Wang. "Profit Allocation in Collaborative Multiple Center Joint Distribution Vehicle Routing Problem". Presented by **Yong Wang** at the 95th Annual Meeting of Transportation Research Board, Jan. 2016.
223. Wang, Sheng, Yinhai Wang, Genyao Fan, and Bingtao Wu. "The Service Quality Evaluation and Improvement on Coach Customers of Coach Terminal." Presented by **Sheng Wang** at the 95th Annual Meeting of Transportation Research Board, Jan. 2016.

224. Tang*, Jinjun, Han Jiang, Zhibin Li, Meng Li, Fang Liu, and Yinhai Wang. "A Hierarchical Model for Taxis' Customer Searching Behaviors using GPS Trajectory Data". Presented by **Jinjun Tang** at the 95th Annual Meeting of Transportation Research Board, Jan. 2016.
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227. Pu*, Ziyuan, Zhibin Li, John Ash*, Wenbo Zhu*, and Yinhai Wang. "Spatial Modeling of Sensitivity of On-Street Parking Occupancy to Price Change". Presented by **Ziyuan Pu** at the 95th Annual Meeting of Transportation Research Board, Jan. 2016.
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230. Chen, Xianche, Yajie Zou, Benjamin Wright, and Yinhai Wang. "Examining Impact of Traffic Incidents on Travel Time Reliability of Freeway High-Occupancy-Vehicle Lanes". Presented by **Xianche Chen** at the 95th Annual Meeting of Transportation Research Board, Jan. 2016.
231. Zhang, Weibin Yajie Zou, Jinjun Tang*, John Ash*, and Yinhai Wang. "Short-Term Prediction of speed prediction using Queue at Ferry Terminal Based on Machine Learning Method". Presented by **Weibin Zhang** at the 95th Annual Meeting of Transportation Research Board, Jan. 2016.
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233. Ke*, Ruimin, John Ash*, Zhibin Li, and Yinhai Wang. "Efficient Bidirectional Traffic Flow Parameter Estimation from Aerial Videos". Presented by **Ruimin Ke** at the 95th Annual Meeting of Transportation Research Board, Jan. 2016.
234. Zhu*, Wenbo, Benjamin Wright*, Zhibin Li, Yinhai Wang, and Ziyuan Pu*. "Analyzing the Impact of Grade on Fuel Consumption for the National Interstate Highway System". Presented by **Wenbo Zhu** at the 95th Annual Meeting of Transportation Research Board, Jan. 2016.
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236. Henrickson*, Kristian Yinhai Wang, and John Ash*. "Predictive Analysis of Probe Vehicle Data Completeness". Presented by **Kristian Henrickson** at the 95th Annual Meeting of Transportation Research Board, Jan. 2016.
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240. Wang, Jiangfeng, Min Wang, Yinhai Wang, Xuedong Yan, and Ruoxi Xiong. "Analysis of Sideswipe Collision Precursors Considering Spatial-Temporal Characters of Freeway Traffic." Presented by **Jiangfeng Wang** at the 94th Annual Meeting of Transportation Research Board, Jan. 2015.
241. Hua*, Xuedong, Wei Wang, Yinhai Wang, Ziyuan Pu, and Wenzhu Zou. "Optimizing Phase Compression for Transit Signal Priority at Isolated Intersections." Presented by **Xuedong Hua** at the 94th Annual Meeting of Transportation Research Board, Jan. 2015.
242. Hua*, Xuedong, Wei Wang, Kristian Henrickson, Wenbo Zhu, and Yinhai Wang. "Control Strategy Optimization for Two-Lane Highway Lane-Closure Work Zones." Presented by **Xuedong Hua** at the 94th Annual Meeting of Transportation Research Board, Jan. 2015.
243. Wang*, Yinsong, Wanjing Ma, Kristian Henrickson, Yinhai Wang, and Xiaoguang Yang. "Dynamic Lane Assignment Approach for Freeway Weaving Segment Operation." Presented by **Yinsong Wang** at the 94th Annual Meeting of Transportation Research Board, Jan. 2015.
244. Wang*, Yinsong, Yajie Zou, Kristian Henrickson, Yinhai Wang, and Xiaoguang Yang. "Google Earth Elevation Data Extraction and Accuracy Assessment for Transportation Applications." Presented by **Yinsong Wang** at the 94th Annual Meeting of Transportation Research Board, Jan. 2015.
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246. Wang*, Yong, Xiaolei Ma*, Zhibin Li*, Maozeng Xu, and Yinhai Wang. "Profit Allocation for Optimizing Logistics Joint Distribution Network Structure." Presented by **Yong Wang** at the 94th Annual Meeting of Transportation Research Board, Jan. 2015.
247. Henrickson*, Kristian, Yajie Zou*, and Yinhai Wang. "Flexible and Robust Method for Missing Loop Detector Data Imputation." Presented by **Kristian Henrickson** at the 94th Annual Meeting of Transportation Research Board, Jan. 2015.
248. Tian, Zong, Hao Xu, Gerry De Camp, Michael Kyte, and Yinhai Wang. "Readily Implementable Signal Phasing Schemes for Diverging Diamond Interchanges." Presented by **Zong Tian** at the 94th Annual Meeting of Transportation Research Board, Jan. 2015.
249. Zhang, Shen, Jinjun Tang*, Hua Wang, and Yinhai Wang. "Enhancing Traffic Incident Detection Using Spatial Point Pattern Analysis on Social Media." Presented by **Jinjun Tang** at the 94th Annual Meeting of Transportation Research Board, Jan. 2015.
250. Tang*, Jinjun, Yinhai Wang, Shen Zhang, Hua Wang, and Fang Liu. "On Missing Traffic Data Imputation Based on Fuzzy C-means Method by Considering Spatial Temporal Correlation." Presented by **Jinjun Tang** at the 94th Annual Meeting of Transportation Research Board, Jan. 2015.
251. Zou*, Yajie, Xuedong Hua*, Yanru Zhang, and Yinhai Wang. "Hybrid Short-Term Freeway Speed Prediction Methods Based on Periodic Analysis." Presented by **Yajie Zou** at the 94th Annual Meeting of Transportation Research Board, Jan. 2015.
252. Wang, Zhongyu, Qing Cai, Bing Wu, Lingyu Zheng, and Yinhai Wang. "Estimating Queue Length at Undersaturated and Oversaturated Signalized Intersections Using Multi-Source Data: A Shockwave Theory Approach." Presented by **Zhongyu Wang** at the 94th Annual Meeting of Transportation Research Board, Jan. 2015.
253. Ke*, Ruimin, Yingying Zhang*, and Yinhai Wang. "Roadway Surveillance Camera Calibration Using Standard Moving Object." Presented by **Ruimin Ke** at the 94th Annual Meeting of Transportation Research Board, Jan. 2015.

254. Chen*, Xiaofeng, Kris Henrickson, and Yinhai Wang. "Kinect-based Pedestrian Detection for Crowded Scenes." Presented by **Yinhai Wang** at North America Travel Monitoring Exposition and Conference (NATMEC) 2014. Chicago, July 2014.
255. Xiao*, Sa and Yinhai Wang. "Data-Driven Geospatial-Enabled Transportation Platform for Freeway Performance Analysis." Presented by **Yinhai Wang** at North America Travel Monitoring Exposition and Conference (NATMEC) 2014. Chicago, July 2014.
256. Henrickson * Kris, Yegor Malinovskiy, and Yinhai Wang. "Opportunistic GPS Location and MAC Address Sensing for Pedestrian Data Collection." Presented by **Yinhai Wang** at North America Travel Monitoring Exposition and Conference (NATMEC) 2014. Chicago, July 2014.
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258. Corey*, Jonathan, Yunteng Lao*, and Yinhai Wang. "Applicability of Conditional Left Turn Phase Reservice Strategies." Presented by **Jonathan Corey** at the 93rd Annual Meeting of Transportation Research Board, Jan. 2014.
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260. Wang*, Yong, Xiaolei Ma*, Yunteng Lao*, Maozeng Xu, and Yinhai Wang. "A Fuzzy Customer Clustering Algorithm for Optimizing Hierarchical Logistics Network Structure." Presented by **Yong Wang** at the 93rd Annual Meeting of Transportation Research Board, Jan. 2014.
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262. Zhang, Shen, Hua Wang, Yinhai Wang, and Xin Liu. "Analysis of Weather-Lagged Effects on Freeway Free-Flow Characteristics in Jilin, China." Presented by **Shen Zhang** at the 93rd Annual Meeting of Transportation Research Board, Jan. 2014.
263. Wang*, Yong, Xiaolei Ma*, Yunteng Lao*, Zhibin Li, and Yinhai Wang. "A Two-stage Heuristic Algorithm for Vehicle Routing Problem with Simultaneous Pickup and Delivery." Presented by **Yong Wang** at the 93rd Annual Meeting of Transportation Research Board, Jan. 2014.
264. Wang*, Yong, Xiaolei Ma*, Yunteng Lao*, Jianxin Fan, and Yinhai Wang. "A Hybrid of Particle Swarm Optimization and Genetic Algorithm for the Regionalism of Freight Distribution." Presented by **Yong Wang** at the 93rd Annual Meeting of Transportation Research Board, Jan. 2014.
265. Cai, Qing, Zhongyu Wang, Lingyu Zheng, Bing Wu, and Yinhai Wang. "A Shockwave Approach to Estimating Queue Length at Signalized Intersections by Fusing Data of Point and Mobile Sensors." Presented by **Qing Cai** at the 93rd Annual Meeting of Transportation Research Board, Jan. 2014.
266. Ma*, Xiaolei, Yinhai Wang, Yong Wang*, and Yunpeng Wang. "Development of Data-Driven Platform for Transit Performance Measures Using Smart Card Data and GPS Data." Presented by **Xiaolei Ma** at the 93rd Annual Meeting of Transportation Research Board, Jan. 2014.
267. Chen, Xiqun, Xi Lin, Dingyuan Xu, Yinhai Wang, and Meng Li. "Applying Least Squares Support Vector Machines for Prediction of Red-Light-Running Based on Continuous Vehicle Trajectory Measurements." Presented by **Xiqun Chen** at the 93rd Annual Meeting of Transportation Research Board, Jan. 2014.
268. Quan, Wei, Datong Liu, Hua Wang, and Yinhai Wang. "Prediction of Multivariate Traffic Parameters under Normal and Abnormal Conditions on the Basis of Multi-Scale Online SVR." Presented by **Wei Quan** at the 93rd Annual Meeting of Transportation Research Board, Jan. 2014.

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270. Tang*, Jinjun, Guangning Xu*, Yinhai Wang, Hua Wang, Shen Zhang, and Fang Liu. "Traffic Flow Prediction Based on Hybrid Model Using Double Exponential Smoothing and Support Vector Machine." Presented by **Jinjun Tang** at the 16th International IEEE Conference on Intelligent Transportation Systems (ITSC 2013). Oct. 2013.
271. Tang*, Jinjun, Yinhai Wang, Hua Wang, and Fang Liu. "Complex Network Approach for the Complexity and Periodicity in Traffic Time Series." Presented by **Jinjun Tang** at the 13th COTA International Conference of Transportation Professionals (CICTP 2013). August 2013.
272. Liu*, Xiaoyue, Yinhai Wang, Bastian Schroeder, and Nagui Rouphail. "Analysis of Managed Lanes on Freeway Facilities." Presented by **Yinhai Wang** at the TRB Mid-Year Meeting of the Freeway Operations, Active Traffic Management, and Managed Lane Committees, Atlanta, Georgia. June 23-26, 2013.
273. Malinovskiy*, Yegor, Bahar Namaki*, Ted Bailey, Ron Vessey, and Yinhai Wang. "Error Assessment for Emerging Traffic Data Collection Devices." Presented by **Yegor Malinovskiy** at the 2013 Western States Rural Transportation Technology Implementers Forum, Yreka, CA, June 18-20.
274. Ma*, Xiaolei, Sa Xiao, Jonathan Corey, and Yinhai Wang. "Digital Roadway Interactive Visualization and Evaluation Network – DRIVE Net." Presented by **Jonathan Corey** and Xiaolei Ma at the USDOT Data Palooza. May 18-19, 2013.
275. Malinovskiy*, Yegor and Yinhai Wang. "Interpreting Opportunistic Mobile Device Encounter Data for Transportation." Presented by **Yegor Malinovskiy** at the 16th COTA Annual Symposium Sustainable Transportation and Development in China, Jan. 2013.
276. Xiao*, Sa, Runze Yu*, and Yinhai Wang. "Modeling Framework for Long Distance Pleasure Travel Supply Analysis." Presented by **Sa Xiao** at the 92nd Annual Meeting of Transportation Research Board, Jan. 2013.
277. Yu*, Runze, Xiaoyue Liu*, and Yinhai Wang. "Coherent Approach for Modeling and Nowcasting Hourly Near-Road Black Carbon Concentrations in Seattle, Washington." Presented by **Xiaoyue Liu** at the 92nd Annual Meeting of Transportation Research Board, Jan. 2013.
278. Tang*, Jinjun, Hua Wang, Yinhai Wang, Xiaoyue Liu, and Fang Liu. "Hybrid Prediction Approach Based on Weekly Similarities of Traffic Flow for Different Temporal Scales." Presented by **Jinjun Tang** at the 92nd Annual Meeting of Transportation Research Board, Jan. 2013.
279. Wang*, Yong, Xiaolei Ma*, Yunteng Lao*, Yinhai Wang, and Haijun Mao. "Vehicle Routing Problem: Simultaneous Deliveries and Pickups with Split Loads and Time Windows." Presented by **Xiaolei Ma** at the 92nd Annual Meeting of Transportation Research Board, Jan. 2013.
280. Grislis*, Aivis, Yunteng Lao*, Yao-Jan Wu*, and Yinhai Wang. "Parameters Influencing Single-Vehicle Large-Truck Accidents on Rural Two-Lane Roads in Washington State." Presented by **Yinhai Wang** at the 92nd Annual Meeting of Transportation Research Board, Jan. 2013.
281. Lao*, Yunteng, Guohui Zhang*, and Yinhai Wang. "Generalized Nonlinear Models for Rear-End Crash Risk Analysis." Presented by **Yunteng Lao** at the 92nd Annual Meeting of Transportation Research Board, Jan. 2013.
282. Zhang*, Guohui and Yinhai Wang. "Innovative Coordinated Ramp Metering Control Strategy for Freeway Congestion Mitigation." Presented by **Guohui Zhang** at the 92nd Annual Meeting of Transportation Research Board, Jan. 2013.

283. Ma*, Xiaolei, Yao-Jan Wu*, Yinhai Wang, Feng Chen, and Jianfeng Liu. "Mining Smart Card Data for Transit Riders' Travel Patterns." Presented by **Xiaolei Ma** at the 92nd Annual Meeting of Transportation Research Board, Jan. 2013.
284. Liu*, Xiaoyue, Guohui Zhang*, Carmen Kwan, Yinhai Wang, and Brian Kemper. "Simulation-Based Scenario-Driven Integrated Corridor Management Strategy Analysis." Presented by **Xiaoyue Liu** at the 92nd Annual Meeting of Transportation Research Board, Jan. 2013.
285. Liu*, Xiaoyue, Guohui Zhang*, and Yinhai Wang. "Twin Cell Modeling Approach for Parallel Freeway Facilities: Managed-Lane Example." Presented by **Xiaoyue Liu** at the 92nd Annual Meeting of Transportation Research Board, Jan. 2013.
286. Wang*, Yong, Xiaolei Ma*, Yunteng Lao*, Yinhai Wang, and Haijun Mao. "Location Optimization of Multiple Distribution Centers Based on Fuzzy Clustering Algorithm." Presented by **Xiaolei Ma** at the 92nd Annual Meeting of Transportation Research Board, Jan. 2013.
287. Wang, Hua, Wei Quan, Yinhai Wang, and Xiaoyue Liu. "Safety Distance Modeling on the Basis of Vehicle-to-Vehicle Communication." Presented by **Hua Wang** at the 92nd Annual Meeting of Transportation Research Board, Jan. 2013.
288. Corey*, Jonathan, Yunteng Lao*, and Yinhai Wang. "Quantifying and Comparing Left-Turn Strategy Travel Time and Queuing Performance." Presented by **Jonathan Corey** at the 92nd Annual Meeting of Transportation Research Board, Jan. 2013.
289. Ma*, Xiaolei, Yinhai Wang, Feng Chen, and Jianfeng Liu. "Transit Smart Card Data Mining for Passenger Origin Information Extraction." Presented by **Xiaolei Ma** at the 92nd Annual Meeting of Transportation Research Board, Jan. 2013.
290. Corey*, Jonathan, Yunteng Lao, Xin Xin, and Yinhai Wang. "Improving Intersection Performance with Left Turn Phase Reservice Strategies." Presented by **Jonathan Corey** at the 14th International IEEE Conference on Intelligent Transportation Systems, Sept. 2012.
291. Zheng*, Jianyang and Yinhai Wang. "Estimating
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293. Ma*, Xiaolei, Runze Yu*, and Yinhai Wang. "Developing Regional Map-Based Platform for Spatial and Temporal Assessment of Traffic Emission Inventory." Presented by **Xiaolei Ma** at the 12th COTA International Conference of Transportation Professionals (CICTP 2012). August 2012.
294. Yegor*, Malinovskiy and Yinhai Wang. "Technologies for Pedestrian and Bicycle Data Collections." Presented by **Yegor Malinovskiy** at Seattle Department of Transportation, Seattle, WA, July 2012.
295. Ma*, Xiaolei, Jonathan Corey*, and Yinhai Wang. "DRIVE Net: an E-Science Platform for Transportation Data Management, Visualization, and Decision Support." Presented by **Jonathan Corey** at Seattle Department of Transportation, Seattle, WA, July 2012.
296. Ma*, Xiaolei, Jonathan Corey*, and Yinhai Wang. "New Online Platform for Transportation Data Management, Visualization, and Decision Support." Presented by **Yinhai Wang** at NATMEC 2012, Dallas, TX, June 2012.
297. Liu*, Xiaoyue, Guohui Zhang*, and Yinhai Wang. "A Twin Cell Modeling Approach for Parallel Freeway Facilities – A Managed Lane Example." Presented by **Yinhai Wang** at TRB Joint Meeting of Highway Capacity and Quality of Services (AHB40) and Traffic Flow Theory Committee (AHB45), Fort Lauderdale, FL, June 19-22, 2012.
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409. Wang, Yinhai and Nancy Nihan. "Quantitative analysis on angle-accident risk at signalized intersections." Presented by **Yinhai Wang** at the 9th World Conference on Transport Research, Korea, July 2001.
410. Wang, Yinhai and Nancy Nihan. "Dynamic Estimation of Freeway Speed with Single-Loop Measurements." Presented by **Yinhai Wang** at the 11th Annual Meeting of ITS America, Florida, June 2001.
411. Wang, Yinhai and Nancy Nihan. "Dynamic Estimation of Freeway Large Truck Volume Based on Single Loop Measurements." Presented by **Yinhai Wang** at the 80th Annual Conference of Transportation Research Board, Washington, D.C., Jan. 2001.
412. Wang, Yinhai and Nancy Nihan. "Freeway Traffic Speed Estimation Using Single Loop Measurements." Presented by **Yinhai Wang** at the 79th Annual Conference of Transportation Research Board, Washington, D.C., Jan. 2000.
413. Wang, Yinhai and Hitoshi Ieda. "Using Accident Observations to Evaluate Rear End Accident Risk at Four-Legged Signalized Intersections." Presented by **Yinhai Wang** at the 8th World Conference of Transportation Research, Belgium, July 1998.
414. Saito, Koji, Yinhai Wang, Kiyoshi Takahashi, and Hitoshi Ieda. "A Study on Intersection Angle Accident Risk with Drivers' PRT Considered." Presented by **Koji Saito** at the 53rd Annual Conference of the Japan Society of Civil Engineers. Japan. Sept. 1998.
415. Yinhai Wang and Hitoshi Ieda. "Effects of Drivers' Age, Flow Rate and Some Other Road Environment Related Factors on Traffic Accidents at Four-Legged Signalized Intersections." Presented by **Yinhai Wang** at the 2nd Conference of Eastern Asia Society for Transportation Studies, Korea, May 1998.
416. Wang, Yinhai, Kiyoshi Takahashi, and Hironori Kato. "Elderly Drivers' Features and Their Effects on Accident Risk." Presented by **Yinhai Wang** at the 23rd Annual Conference of the East Japan Society of Civil Engineers, Japan, March 1997.

417. Wang, Yinhai and Hitoshi Ieda. "Traffic Safety Under Mixed Traffic Condition in Beijing." Presented by **Yinhai Wang** at the 51st Annual Conference of the Japan Society of Civil Engineers, Japan, Sept. 1996.
418. Wang, Yinhai, Qixin shi, and Rongpeng Xia. "A Cost Comparison between the Prefabricated Reinforced Concrete BOX Structure and the Masonry structure." Presented by **Yinhai Wang** at the 1st International Conference on Open Building and Structure Engineering, China, Nov. 1995.
419. Wu, Xiangdong, Qixin Shi, and Yinhai Wang. "A Dynamic Analysis on Pre-stressed Concrete Bridges with Continuous Curvaceous Beams under Earthquake Loads." Presented by **Qixin Shi** at the 3rd conference of transportation engineering in China (in Chinese), China, Aug. 1994.

Professional society memberships.

Institute of Transportation Engineers (ITE) (2004 – present)
American Society of Civil Engineers (ASCE) (2004 – present)
Institute of Electrical and Electronics Engineers (IEEE) (2004 – present)
Transportation Research Board (TRB) (1999 - present)
Chinese Overseas Transportation Association (COTA) (2000 – present)
Association for Computing Machinery (ACM) (2017 – 2021)
World Conference on Transport Research (1995 - 2010)
Institute for Operations Research and the Management Sciences (INFORMS) (2007 – 2009)
Japan Society of Civil Engineers (1995 - 1998)
China Civil Engineering Society (1989 - 1995)

Other

Reviews Made:

Journal, Proceedings, and Proposals	Number
Journal of Transportation Engineering	297
Accident Analysis and Prevention	41
Journal of Computing in Civil Engineering	105
Transportation Research: Part A	11
Transportation Research: Part B	5
Transportation Research: Part C	55
Transportation Research Record	293
Journal of Advanced Transportation	9
Journal of Infrastructure Systems	2
Journal of Intelligent Transportation Systems	67
Computer-Aided Civil and Infrastructure Engineering	22
Computer Applications in Engineering Education	2
ITS Journal	3
IATSS Research	2
Journal of Engineering Research	1

World Transport Research	1
ITS America Annual Meeting	2
IEEE's Intelligent Transportation Systems Conference	33
IEEE Transactions on Vehicular Technology	1
IEEE Transactions on Intelligent Transportation Systems	9
IEEE Intelligent Transportation Systems Magazine	16
International Symposium on Transportation and Traffic Theories (ISTTT)	7
World Congress on ITS	3
Research Proposal for PATH, Univ. of California at Berkeley	7
Research Proposal for Rhode Island University Transportation Center	2
Research Proposal for New England University Transportation Center	5
Research Proposal for Southeast University Transportation Center	1
Research Proposal/Report for TransNow	13
Research Proposal for METRANS Transportation Center	26
Research Proposal for Center for Multimodal Solutions for Congestion Mitigation (CMS) at University of Florida	48
Research Proposal for the UVM Transportation Center	1
Research Proposal for Ohio Transportation Consortium	3
Research Proposal for Oregon Transportation Research and Education Consortium	7
The First International Conference on Transportation Logistics (Singapore)	2
NSF Proposal	47
China NSF Proposal	177
Qatar NSF Proposal	11
Total	1337

***Referee for University Tenure/Promotion Evaluation Package*: 49**

GRADUATE STUDENTS

Chaired Doctoral Degrees

- Shuyi Yin, Automated Road Environment Perception for Safety Assessment with Tuning-Free Vision Foundation Models, June 2025, Machine Learning Engineer at Instacart.
- Chenxi Liu, Situation-aware Customized Machine Intelligence for Transportation Safety, Equity,

and Resilience, Summer 2024, University of Utah

- Hao Frank Yang, Customizing Trustworthy Machine Learning and Advanced Computing Methods for Cooperative and Equitable Traffic Systems, Summer 2023, Johns Hopkins University
- Dennis Tsai, Network-wide Traffic Feature Learning and Forecasting Under Non-stationary Circumstances Using Advanced Deep Neural Network *Dissertation Title TBD*, Summer 2023, Amazon
- Sam Ricord, Quantifying Equity and Equity Biases in Transportation and Data, Summer 2023, SRF Consulting Group
- Meixin Zhu, Behavior Modeling and Motion Planning for Autonomous Driving Using Artificial Intelligence, Summer 2022, Hong Kong University of Science and Technology
- Yifan Zhuang, Efficient and Robust Machine Learning Methods for Challenging Traffic Video Sensing Applications, Summer 2022, Google
- Zhiyong Cui, Deep Learning Methods for Improved Short-term Network-wide Road Traffic Forecasting , Winter 2021, Beihang University
- John Ash, Understanding Freeway Crashes Through Data-Driven Solutions, Winter 2021, University of Cincinnati
- Ruimin Ke, Real-Time Video Analytical Methods and Systems for Smart Transportation Applications, Autumn 2020, University of Texas El Paso
- Ziyuan Pu, Developing Wireless Sensing Methods and Technologies for Enhanced Transit Rider and Non-Motorized Traffic Data, Summer 2020, Monash University
- Wenbo Zhu, A Connected Vehicle Based Coordinated Adaptive Navigation System, Spring 2019, Amazon
- Kristian Henrickson , A Framework for Understanding and Addressing Bias and Sparsity in Mobile Location-Based Traffic Data, Autumn 2018, Uber
- Jinjun Tang, Complex Network based Dynamic Characteristics Analysis and Hybrid Prediction of Traffic Flow, Autumn 2016, Central South University
- Jonathan Corey, Impact Quantification for Advanced Traffic Signal Control Systems, Spring 2014, University of Cincinnati
- Xiaolei Ma, Smart Card Data Mining and Inference for Transit System Optimization and Performance Improvement, Spring 2013, Beihang University
- Xiaoyue Liu, Analysis of Managed Lanes on Freeway Facilities, Spring 2013, University of Utah
- Yegor Malinovskiy, Mobile Device Identifier Data Collection and Analysis for Transportation Intelligence Purposes: Applications, Uncertainty, and Privacy, Spring 2013, Amazon
- Yunteng Lao, Traffic Crash Modeling Considering Inconsistent Observations, Interaction Behavior, and Nonlinear Relationships, Spring 2013, Consultant
- Runze Yu, Modeling Long Distance Highway Travel: A National Data Framework Approach, Summer 2012, World Bank
- Yao-Jan Wu, Traffic Sensor Data-Based Arterial Performance Measurement: Methodology and Online Implementation, Winter 2010, University of Arizona
- Guohui Zhang, ITS Sensor Data-Based Control Methods for Optimal Traffic System Operations, Spring 2008, University of Hawaii
- Patikhom Cheevarunothai, *Quality Control on ITS Sensor Data*, Spring 2008, Thammasat Universoty, Thailand
- Ryan P. Avery, Video Image Processing for Improved Freeway Traffic Operation Data, Autumn 2007, University of Washington

Co-Chaired Doctoral Degrees

- Jianyang Zheng, Co-Chaired with Nancy Nihan, Performance Measurements for Signalized Intersections with Video Image Processing, Winter 2008, Maryland State HA

Current Doctoral Students (Chaired by Yinhai Wang)

- Yifan Ling, *Dissertation Title TBD*, passed qualifying exam, 2022
- Cole Kopca, *Mobility as a Service* , passed qualifying exam, 2017
- Nutvara Jantarathaneewat, *Dissertation Title TBD*
- Shucheng Zhang, Dissertation Title TBD
- Yan Shi, Dissertation Title TBD
- Ollie Wiesner, Dissertation Title TBD
- Mahdard Nasri, Dissertation Title TBD
- Bingzhang Wang, Dissertation Title TBD
- Sruangsaeng Chaikasetsin, *Dissertation Title TBD*
- Yuang Zhang, Dissertation Title TBD

Chaired Masters Degrees

- Eric Jonah Lorica, Non-Thesis, Research Paper Topic Evaluation of a Shared-Use Path Impact on Fatalities: Haxton Way Pedestrian Trail, 2025, HNTB.
- Zalaan Khan, Non-Thesis, Comparative Analysis of Machine Learning Algorithms for Traffic Data Imputation as a Time Series Problem, Autumn 2024, Jacobs
- Bingzhang Wang, Thesis, Real-Time Data Informed Traffic Analytics Framework Powered by Large Language Model (LLM), Spring 2024, UW PhD program
- Rongjing Xia, Non-Thesis, Customized Signalized Intersection Control for Pedestrian Safety Enhancement through Computer Vision Technologies, Spring 2024, Concord Engineering
- Bryce Beason, Non-Thesis, Analysis of Bus Lane Enforcement Tactics and Causes of Violation Rates in Seattle, Spring 2024, City of Auburn
- Ollie Wiesner, Non-Thesis, Bicycle Detection at Signalized Intersections: A Comprehensive Evaluation of GRIDSMART's Bicycle Detection System, Autumn 2023, UW PhD program
- Jeffrey Carlson, Non-Thesis, Zero-shot Learning Methods for Cyclist Detection in Transportation Scenarios, Spring 2023, Transpo Group
- Arthur Semionov, Non-Thesis, Modeling and Evaluating Impacts of Post-Covid Return-to-Work Plans on Transportation Systems, December 2022, WSDOT
- Fengze Yang, Chair, Non-Thesis, Vulnerable Road User Detection in view of Ensemble Learning Supported by Crowd Density and Object Detection, December 2022, INRIX, Inc.
- Warkaa Almustafa, Non-Thesis, Performance Evaluation of ALINEA and PID Controller Application for Freeway Ramp Metering: Study Site of I-5 Freeway Seattle, WA, June 2022, WSDOT
- Lingju Lv, Non-Thesis, Edge-based Dark Channel Prior Real-time Visibility Detection on Monocular Surveillance System, Autumn 2021, China Construction Bank
- Yifan Ling, Thesis, Mobile-Device-Based Solution for Non-motorized Users and Traffic Signal Control System Interactions, March 2022, UW PhD Program
- Roberto Gomez, Non-Thesis, How New Orders and Regulations due to COVID-19 Affected

Driving Behavior and Patterns, Autumn 2021, HNTB

- Hung Lo, Non-Thesis, Edge Artificial Intelligence for Road User Detection in Different Weather Conditions with Data Augmentation, Spring 2021, TikTok
- Ray Huang, Non-Thesis, Evaluating Transit Inequity during COVID-19 via Lorenz Curve and AHP-Entropy Topsis, Spring 2021, LinkedIn
- Hubert Chen, Non-Thesis, A Multivariate Dual LSTM-Based Network for Traffic Forecasting Under Interference, Spring 2021, Pure Storage
- Sam Ricord ,Thesis, Impact of Homeless Encampments on State Department of Transportation Right of Way, Spring 2020, UW PhD Program
- Ian Nisbet, Non-Thesis, Identifying Curbside Space Usage Patterns Using Video-Based Sensing Technology, Autumn 2020, City of Bellevue
- Hao Yang, Thesis, Novel Traffic Sensing Using Multi-Camera Car Tracking and Re-Identification (MCCTRI), Winter 2020, UW PhD Program
- Chenxi Liu, Thesis, Bi-level Optimization Algorithm for Dynamic Reversible Lane Control based on Short-term Traffic Flow Prediction, Winter 2020, UW PhD Program
- Tianyi Li, Non-Thesis, "Centralized" Taxi Industry in Perspective of Time and Space: A Case Study of Chicago, Winter 2020, University of Minnesota PhD Program
- Lingran Meng, Non-Thesis, Road Surface Condition Classification Using Video Camera Images and Weather Data in Washington State, Winter 2020, AECOM
- Chris Gottsacker, Thesis, A Pilot Data System and Analytical Framework for Tribal and Rural Community Traffic Safety Equity Assessments, Spring 2019, Maricopa Association of Governments
- Yifan Zhuang, Thesis, Wireless Parking Detection System Based on Sensor Fusion and IoT Communication, Winter 2019, UW PhD program
- Mingjian Fu, Thesis, Travel Time Measurement using MAC address-based mobile device sensing technology: Principle, Practice and Challenges, Autumn 2018, INRIX Inc.
- Mayuree Binjolkar, Non-Thesis, Urban-Traffic-Scene-Understanding Based on Estimated Depth Information from Monocular Images, Spring 2018, UW PhD Program
- Ye Bi, Non-Thesis, Connected Vehicle Based Adaptive Vehicle Routing Algorithm for Microscopic Simulation Model, Autumn 2018, Transportation Engineering Northwest
- Hiroyuki Hinohara, Thesis, *Analysis of Toll Lanes Access Violation Behavior*, Winter 2018, Japan Highways
- Jiwoon Kang, Thesis, *Driver Aging Effects on Car Crashes*, Spring 2017, Korea Highways
- Sishuang Wang, Non-Thesis, Evaluation of Passing Time of Vehicles at Intersections Based on Bluetooth Data, Summer 2017, Accenture
- Ruimin Ke, Thesis, Novel Framework for Real-time Traffic Flow Parameter Estimation from Aerial Videos, Spring 2016, UW PhD Program
- Xianzhe Chen, Non-Thesis, Examining the Impact of Traffic Incidents on the Travel Time Reliability of Freeway High-occupancy Vehicle Lanes, Winter 2016, Concord Engineering
- Tao Zhu, Non-Thesis, Large-scale Travel Time Reliability Analysis and Visualization, Spring 2016, Google
- Meng Xia, Non-Thesis, Smartphone-Based Transit Assistive Technology -- Notification with Real-Time Bus Arrival Information for Visually Impaired People, Winter 2016, Seattle DOT
- Michael Corwin, Non-Thesis, *User Equilibrium and Travel Cost Forecasting*, Summer 2015, WSP
- Ziyuan Pu, Non-Thesis, Spatial Modeling of Sensitivity of On-Street Parking Demand in

Response to Price Change, Winter 2015, UW PhD Program

- Wenbo Zhu, Thesis, Two-Lane Highway Work Zone Capacity Model and Control Analysis, Winter 2015, UW PhD Program
- Matthew Dunlap, Thesis, How the Weather, Land Use, and Infrastructure Influence Non-Motorized Mode Choices, Winter 2015, Seattle DOT
- David Nguyen, Non-Thesis, Underutilized Corridor: Congestion Intensity and Consistency on SR 99 and I-5, Autumn 2014, WSP
- Arianna Allahyar, Non-Thesis, Attitudes about Parking Requirements: A Survey of Local Officials, Autumn 2014, City of Stockholm
- Kris Henrickson, Thesis, Flexible and Robust Missing Data Treatments in Traffic Sensor Datasets, Autumn 2014, UW PhD Program
- Chaofan Bi, Non-Thesis, Traffic Flow Condition Associated with Truck-involved Crash on Freeway, Winter 2014, Alibaba
- Matthew Palzkill, Non-Thesis, Tolling Implications on Traffic: A study of vehicle trends over time on SR 520, Autumn 2014, Jacobs
- Paul Sharman, Non-Thesis, Vehicle Detection Technologies: For City-Wide Street Parking Management, Winter 2014, Transpo
- Xiaoyi Liu, Non-Thesis, Travel Time Detection Device Accuracy Evaluation: Comparing Sensys Magnetometer and LPR on Seattle's City Street, Winter 2014, Transpo
- Carman Kwan, Non-Thesis, Econometric Model of the Integrated Corridor Management Strategy for Route Change, Spring 2013, Fehr & Peers
- Sonia Xiao, Thesis, Digital Roadway Interactive Visualization and Evaluation Network 3.0: Modeling Transportation Data, Spring 2013, TikTok
- Tianxing Cheng, Non-Thesis, Bus Lane Impact on Bluetooth Travel Time Accuracy: A Case Study, Spring 2013, Amazon
- Jun Wang, Non-Thesis, Applying Left Turn Phase Re-servicing on Diamond Interchanges, Autumn 2012, LLA Consultancy Limited
- Brian Mann, Non-Thesis, The Impact of HOT Lane Use on Traffic Safety on SR 167, Spring 2012, WSDOT
- Xin Xin, Thesis, The Impacts of Left Turn Phase Re-service on Intersection Performance, Winter 2012, China Highway Research Institute
- Tim Thomson, Thesis, The Operational Performance and Speed-Flow Relationships for Basic Segments of Managed Lane Facilities, Winter 2011, Pare Corporation
- Jonathan Corey, Thesis, Detection and Correction of Loop Detector Sensitivity Level Errors, Spring 2010, UW PhD Program
- Basma Mukari, Non-Thesis, *I-90 Variable Speed Limit Compliance*, Spring 2009, WSDOT
- Todd Merkens, Non-Thesis, Impact of HOT Lane Access Points on Traffic Collisions, Spring 2009, Luum
- Runze Yu, Thesis, *Air Quality Impacts from Heavy Vehicles*, Spring 2009, UW PhD Program
- Yegor Malinovskiy, Thesis, *Occlusion Robust Video-based Vehicle Detection*, Winter 2009, UW PhD Program
- Ken Perrine, Thesis, *Area-Wide Coordinated Ramp Meter Control*, Autumn 2008, UT Austin
- Gretar Aevarsson, Thesis, Two-sided Freeway Weaving Capacity Analysis on Ship Canal Bridge, Autumn 2007, Mannvit Engineering
- Ngan Ha Nguyen, Thesis, Quantitative Safety Analysis for Intersections on Washington State

Two-Lane Rural Highways Traffic Accidents, Summer 2007, WSDOT

- Euneka Robinson-McCutchen, Non-Thesis, Optimizing the Use of Ramp Meters and Fuzzy Logic Using VISSIM, Spring 2007, WSDOT
- Kevin Mizuta, Non-Thesis, Automated License Plate Readers Applied to Real-Time Arterial Performance: A Feasibility Study, Spring 2007, Sound Transit
- Charles Grove, Non-Thesis, Travel Time Data Collection Influences on LOS Determination, Spring 2007, HNTB
- Peter Chen, Non-Thesis, Variance in Intersection Turning Movement Counts and the Need for Automated Collection, Spring 2007, Microsoft
- Atli Levy, Thesis, Cost-Effective Safety Improvements for Two-Lane Rural Roads in Washington State, Winter 2007, Verkfraedistofa Sigurdar Thoroddsen (VST)
- Tony Woody, Non-Thesis, *Calibrating Freeway Simulation Models in VISSIM*, Spring 2006, Parametrix
- Joshua Johnson, Non-Thesis, The Effect of Speed Differentials on Incidents between HOV and General Purpose Lanes, Spring 2006, HDR
- Zahid Khan, Non-Thesis, Evaluation of the Effectiveness of the Speed Awareness Monitor, Spring 2005, Boeing
- Joonki Kim, Thesis, A Numerical Examination of Freeway Rear-End Accidents Considering the Mechanism of Accident Occurrence, Autumn 2004, Korea Research Inst. for Human Settlements
- James L. Slavicek, Non-Thesis, Tolling Options for the New SR-520 Bridge: Electronic vs. Manual Toll Collection, Spring 2004, WSDOT

Co-Chaired Masters Degrees

- Xiaolei Ma, Co-Chaired with Ed McCormack, Thesis, Developing a GPS-based On-line Freight Performance Measures Platform, Spring 2010, UW PhD Program
- Gudmundur Bodvarsson, Co-Chaired with Steve Muench, Thesis, *Effects of loop detector installation on Portland Cement Concrete Pavement lifespan: Case study on I-5*, Autumn 2008, CEO at Ræktunarsamband Flóa og Skeiða

Current Masters Students

- Jingyi He, Non-Thesis, Research Paper Topic TBD, In progress
- Peter Yu, Non-Thesis, Research Paper Topic TBD, In progress
- Yanlin Chen, Non-Thesis, Research Paper Topic TBD, In progress
- Justin Belk, Thesis, Research Paper Topic TBD, In progress
- Dave Carpenter, Non-Thesis, Research Paper Topic TBD, In progress
- Brenna Brown, Non-Thesis, Research Paper Topic TBD, In progress

Other significant student supervision

Ph.D. Committees:

Student	Dissertation Title	Year of Completion
Jiayu Li	An Automation System for Curbside Parking Inventory Digitization	2027 (expected)

Nanye Du	Development of a Modular-Intelligent Sysem with Integrated Hemofiltration and Albumin Dialysis for Multi-Organ Support	2026 (expected)
Ziyuan Wang	An Efficient and Effective Electromagnetic Rewarming Platform for Cryopreservation of Large-Volume Biomaterials.	2025
Qiangqiang Guo	Multi-Scale Signal-Vehicle Coupled Control with Connected and Autonomous Vehicles	2022
Choudhury Nazib Wadud Siddique	Adaptive Sampling Methods for Vehicle Trajectory Data	2019
Wan Li	Connected Vehicle based Traffic Signal Timing Optimization	2019
Ying Jiang	Analysis of Multi-faceted Driving Risks on Expressways and Drivers' Responses to Information Provision	2016
Ruizhu Huang	The Association between Built Environment and Physical Activity	2014
Kari Watkins	Travel Time Reliability in Public Transportation	2011
Ibrahim Karliga	A Framework for Human Body Video Objet Segmentation and Body Parts Tracking	2011
Fei Ye	System Optimization and Protocol Design for Vehicular Networks	2011
Karim Aldin Ismail	Application of Computer Vision Techniques for Automated Roadway Safety Analysis and Traffic Data Collection	2010
Hui Ma	Wireless Mesh Network Performance Using Physical Carrier Sensing	2008
Radhakrishna Sampigethaya	Wireless Network Application in Traffic Monitoring	2007
Jianhua Li	Optimization of Pavement Deterioration Models	2006
Guangtao Zhang	Design, Synthesis, and Evaluation of Cholera Toxin Inhibitors and α-Helix Minetics of Dormancy Survival Regulator	2006
Adam Glynn	Combining Individual and Ecological Data in Linear Multilevel Models	2006
Karl Westby	Systems Analysis of Freight Transportation Networks	2004

Master's Degree Committees:

Student	**Thesis/Paper Title**	**Year of Completion**
Zhijun Liu	Dynamic Signal Control with Connected and Automous Vehicles	2021
Joseph Flood	If everyone else drove off a cliff, would you? An investigation of social norm compliance in freeway traffic	2014
Huizhong Guo	A Study on the Effectiveness of State Mandated Minimum Entry Level Training of New Commercial Drivers	2014
Yihong Wang	A Study on Underutilization of Parking Guidance and Information System (PGIS) in Beijing Area	2011
Steven Drew Cooper	A Simulation Study of Variable Speed Limits and Incident Induced Congestion	2010

Chia-So Chuang	Preliminary Investigation of Roadside Sensors for Weigh-In-Motion Applications	2008
Christopher D. Masek	An evaluation and analysis of left turn restrictions within downtown Bellevue using Synchro and VISSIM	2008
Dustin R Rasmussen	Traffic Simulation Analysis	2008
Kristina Evanoff	Using Commute Trip Reduction Survey Data to Identify Potential Transit Markets*	2006
Eric Forsyth	Central Link Light Rail's Effect on the Construction of the Alaskan Way Viaduct and Seawall Replacement Project*	2006
Ryan Avery	A Region Grow Algorithm for Estimating Freeway Traffic Speed from Single-Loop Traffic Detectors*	2005
Thomas Tumola	A Scalable Architecture for Arterial Performance Measures Using Max Out, Gap Out and Force Off Signal Event Data*	2005
Owen Kehoe	Effects of Bus Stop Consolidation on Transit Speed and Reliability: A Test Case	2004
Jianhua Li	Application of HDM-4 in Washington State Highway System	2004
Taryn Kristof	ATIS Evaluation	2004
Brian Harr	The Woodinville Subdivision and the I-405 Corridor*	2004
Amy Elliott	196th Avenue NE: the Red Brick Road on the Yellowstone Trail*	2004
Johanna Weinstock	Connection Protection: Improvement or Hindrance to King County Metro's Operations? *	2004
Roger Baugh	Sound Transit: A Performance Review*	2004
Theodore Bailey	Signal Optimization Technologies and Strategies*	2004
Jianyang Zheng	Performance Evaluation of the GPS/INS Integrated System in Forest Environment and Urban Area	2002
Naveen Juvva	Statistical Analysis of Washington State Urban Freeway Accident Type Probabilities	2002

* Research paper title.

Undergraduate Research Supervision:

Student	**Research Project Title**	**Year of Completion**
Peter Yu	Design of Intersections	2022
Luyang Gong	Automated Data Collection for Curbside Space Management	2021
Sam Ricord	Calculating Travel Time Across Different Travel Modes Using Bluetooth and WiFi Sensing	2019
Benjamin Wright	Freeway Travel Time Reliability Analysis	2015
Carmen Kwan	Simulation Investigation on Integrated Corridor Management	2012
Melyssa Nagamine	Mobile-Device Based Pedestrian Data Analysis	2011
Zhuohong Shen	Mobile-Device Based Pedestrian Data Collection	2011
Jonathan Corey	Comparing VVDC System with Citilog RoadMedia	2008
Ngan Ha Nguyen	Traffic Accident Modeling Approach Survey	2007
Yegor Malinovskiy	Video-based Pedestrian Detection (received Mary Gates Fellowship)	2007

RESEARCH ACTIVITIES

Funded Research

Funding Agency*	*Title*	Your role with other PI's and co-PI's	Total Amount, Your Amount, (Subcontracts if any, University Matching if any)	Dates (start - finish)
WSDOT	*TPIMS Operational Deployment, Infrastructure, and System Support*	PI	Total amount $1,000,000	09/2026 – 09/2029
WSDOT	*Developing a Summer Camp Program for Transportation Workforce Development*	PI (Co-PI Lingzi Wu)	Total amount $165,000, my amount $100,000	07/2026 – 06/2027
USDOT	*I-5 Truck Parking Information Management System*	Co-PI (PI: Matt Neeley)	Total amount $12,287,274, My amount $550,000	07/2026 – 06/2028
FHWA STIC	*AI-Driven Edge Computing for Traffic Sign Detection*	PI	Total amount $38,332.80	05/2026 – 05/2027
FHWA STIC	*SMART Road Sticker: Enhancing Emergency Response and Roadway Safety Through Intelligent V2X Communication*	PI	Total amount $45,000	05/2026 – 05/2027
WSDOT	*AI-Enabled Performance Forecasting for Transportation System Health and Investment Tradeoffs*	PI	Total amount $50,000	05/2026 – 05/2027
WA Proviso	*Developing Transportation Workforce in Washington State*	PI	Total amount $547,000	07/2026 – 06/2028
USDOT	*The Tribal and Rural Autonomous Vehicles for Efficiency, Liability and Safety (TRAVELS) Center*	Co-PI (PI: Xiaopeng Li)	Total amount $15,000,000, My amount $600,000	06/2025 – 06/2029
WSDOT	*Enhancing Active Transportation User Safety through Cooperative Multi-task Sensing and Infrastructure-to-Everything (I2X) Technologies*	PI	Total amount $200,000,	09/2025 – 09/2026
WSDOT	*Continual Learning for Predicting Truck Parking Availability*	PI	Total amount $100,000, My amount $100,000	09/2025 – 09/2026
WSDOT	*Tolling Research and Operations*	PI	Total: $111,235 My amount: $111,235	07/2025 – 06/2027
WSDOT	*Traffic Management Center*	PI	Total: $397,934 My amount: $397,934	07/2025 – 06/2027
USDOT	*AI-driven CV Technology-enabled Adaptive Integrated Corridor Management and Control Coordination Strategies for Enhancing Corridor-wide Mobility and Safety*	Co-PI (PI: Guohui Zhang)	Total: $4,200,000 My amount $900,000	07/2025 – 06/2026

USDOT	*Develop a New Comprehensive Safety Action Plan*	Co-PI (PI: Portia Shields)	Total: $348,192 My amount $120,000	04/2025 – 03/2026
WSDOT	*Developing a Summer Camp Program for Transportation Workforce Development*	PI (Co-PI Lingzi Wu)	Total amount $165,000, my amount $100,000	02/2025 – 12/2025
USDOT	*Intersection Safety Challenge Phase 1B*	PI	Total: $166,667 My amount $120,000	02/2025 Prize
WSDOT	*Developing an AI Introduction Course*	PI	Total: $12,000 My amount $12,000	12/2024 – 06/2025
HCHRP IDEA	*An IoT Technologies for Active Transportation Sensing and I2X Applications*	PI	Total: $140,000 My amount $100,000	12/2024 – 9/2025
PacTrans	*Next-Gen Transportation Analytics: Enabling Large Language Models in Traffic Frameworks*	PI	Total amount $75,000, My amount $75,000	9/2024 – 8/2025
USDOT	*Improve Roadway and Intersection Safety for Tribal and Communities using Technologies*	Co-PI (PI: Portia Shields)	Total: $1,525,133 My amount $800,000	6/2024 – 6/2027
USDOT	*Real-time Traffic Signal Safety Intervention (RTSSI) project*	Co-PI (PI: Daniel Lai)	Total: $1,426,531 My amount $150,000	6/2024 – 6/2027
WA Proviso	*Engineering Pathway Study and Quick Solutions to Workforce Problems*	PI	Total amount $1,000,000	07/2024 – 06/2025
USDOT	*Intersection Safety Challenge Phase 1A*	PI	Total: $100,000 My amount $80,000	05/2024 Prize
FHWA STIC	*Low-Cost Internet of Things Sensors to Support Avalanche Monitoring Programs*	PI (co-PI: Ed McCormack)	Total: $40,000 My amount $40,000	9/2024 – 3/2026
USDOT	*Intersection Safety Challenge Phase 1A*	PI	Total: $100,000 My amount: $100,000	Prize, no time limit
PacTrans	*Quantification of Representation in Transportation Datasets*	PI	Total amount $100,000, my amount $100,000	6/2024 – 6/2025
PacTrans	*Understanding Human-centered AI through Data Integration and Analytics*	Co-PI	Total amount $150,000, My amount $25,000	03/2024 – 03/2025
Leidos	*Developing and Testing of Cooperative Perception Use Case at the Port of Virginia*	PI	Total: $182,214 My amount: $182,214	05/2024 – 09/2024
WSDOT	*Tolling Research and Operations*	PI	Total: $111,235 My amount: $111,235	07/2023 – 06/2025
WSDOT	*Traffic Management Center*	PI	Total: $397,934 My amount: $397,934	07/2023 – 06/2025
WSDOT	*Avalanche Monitoring System in Mountainous Area Based on an IoT Sensor Network*	PI	Total amount $50,000, my amount $50,000	4/2023 – 3/2025
WSDOT	*Developing a Summer Camp Program for Transportation Workforce Development*	PI (Co-PI Lingzi Wu)	Total amount $165,000, my amount $100,000	07/2024 – 06/2025
USDOT	*Pacific Northwest Transportation Consortium (PacTrans)*	PI (co-PI, Linda Boyle, Jeff Ban, and Jon Froehlich.)	Total amount $15,000,000 This is a center grant. Funding will be redistributed	10/2022 - 09/2027

			to consortium partners depending on competitions.	
WSDOT	*Developing a Summer Camp Program for Transportation Workforce Development*	PI (Co-PI Jia Li of WSU)	Total amount $250,000, my amount $165,000	07/2022 – 06/2024
NCHRP	*NCHRP 07-34 Artificial Intelligence for Transportation Systems Management and Operations Applications*	Co-PI (PI: Yao-Jan Wu at U of Arizona)	Total amount $450,000, my amount $60,000	05/2023 – 10/2025
WSDOT	*Cost-effective traffic and roadway data collection using video cameras: machine learning based approach*	PI	Total amount $200,000, my amount $200,000	7/2023 – 6/2024
USDOT	*Northwestern Tribal Technical Assistance Program Center*	PI (Co-PI: Margo Hill of EWU)	Total amount $1,975,287.94 my amount $1,475,287.94	9/2022 – 8/2027
WSDOT	*Tolling Research and Operations*	PI	Total: $109,499 My amount: $109,499	07/2021 – 06/2023
WSDOT	*Traffic Management Center*	PI	Total: $663,058 My amount: $663,058	07/2021 – 06/2023
NCHRP	*NCHRP 17-100: Leveraging Artificial Intelligence and Big Data to Enhance Safety Analysis*	PI (Co-PI, Venky Shankar, etc.)	Total amount $650,000, my amount $320,000	1/2022 – 7/2024
WSDOT	*Computer Vision for Automated Traffic Sign Detection and Data Inventory*	PI	Total amount $100,000, my amount $100,000	7/2022 – 6/2023
NSF	*The Frontiers of Artificial Intelligence-Empowered Methods and Solutions to Urban Transportation Challenges Workshop*	PI	Total amount $90,090	4/2022 – 10/2023
FHWA STIC	*Cost-Effective Real-Time Visibility Detection System based on Internet of Things (IoT) and Computer Vision Technologies*	PI	Total: $28,984 My amount: $28,984	09/2022 – 09/2023
PacTrans	*3D Structural Information Sensing System (3D-SISS) Based on Road-side Unit (RSU)*	PI	Total amount $40,000, my amount $40,000	12/2021 – 12/2022
C2Smart	*Cost-effective Approach Towards Building a Traffic Sign Data Inventory Using Open Street Images*	PI	Total amount $80,000, my amount $80,000	3/2021 – 2/2022
WSDOT	*Cost-Effective Solution for Truck Parking Facility Monitoring, Availability Prediction, and Management Using Edge Computing and Artificial Intelligence*	PI	Total amount $100,000, my amount $100,000	7/2022 – 6/2023
PacTrans	*Avalanche Monitoring System in Mountainous Area Based on an IoT Snesor Network*	PI	Total amount $10,000, my amount $10,000	9/2022 – 6/2023
PacTrans	*Roadway Traffic and Environmental Conditions Monitoring and Safety Alert System*	PI	Total amount $10,000, my amount $10,000	9/2022 – 6/2023

PacTrans & UrbanEV	*Making Urban Electrical Vehicles a Clean and Safe Solution for First- and Last- Mile Deliveries*	PI	Total amount $20,000, my amount $20,000	9/2022 – 6/2023
CSET	*Cost-Effective System for Rural Roadway Traffic, Surface Conditions and Weather Conditions Monitoring*	PI	Total amount $260,000, my amount $260,000	9/2021 - 09/2023
USDOT	*Pacific Northwest Transportation Consortium (PacTrans)*	PI (co-PI, Anne Moudon and Jeff Ban.)	Total amount $2,583,300 This is a center grant. Funding will be redistributed to consortium partners depending on competitions.	10/2021 - 09/2023
PacTrans	*Enhancing Safety and Accessibility for Active Users at Signalized Intersections under the Signal Phasing and Timing (SPaT) Challenge*	PI	Total: $40,000 My amount: $40,000	03/2021 – 03/2022
PacTrans	*Enhanced Intersection Signal Control System with Pedestrian and Cyclist Crossing Time Assurance*	PI	Total: $10,000 My amount: $10,000	03/2021 – 09/2021
PacTrans	*Truck Parking Events Monitoring using Mobile Unit for Sensing Traffic (MUST) Sensors*	PI	Total: $10,000 My amount: $10,000	03/2021 – 09/2021
PacTrans	*Predict Near-term Traffic Performance like Weather Forecast*	PI	Total: $10,000 My amount: $10,000	03/2021 – 09/2021
FHWA STIC	*An Innovative Internet of Things (IoT) Technology for Comprehensive Traffic Sensing and V2X Applications*	PI	Total: $46,500 My amount: $46,500	03/2021 – 03/2022
WSDOT	*Enhancing Pedestrian Facilities Connecting to Tribal Trnasit*	Co-PI (PI, Littlebull)	Total: $495,000 My amount: $190,000	09/2021 – 09/2022
USDOT	*Development of a Comprehensive Roadway Safety Data Visualization and Evaluation Platform for Safety Improvement Decision Support*	Co-PI (PI, Littlebull)	Total: $430,000 My amount: $170,000	10/2020 – 03/2022
UW CoMotion	*Mobile Unit for Sensing Traffic*	PI	Total: $50,000 My amount: $50,000 (No overhead)	07/2020 – 06/2021
PacTrans	*Development of PacTrans Workforce Development Institute Phase II*	PI (Co-PIs Chang, UI; Connor, UAF; Brown, OSU; & Jessup, WSU)	Total: $350,000 My amount: $86,000	10/2020 – 03/2022
CSET	*Developing Data-Driven Pedestrian Safety Assessment Methods for RITI Communities. Center for Safety Equity in Transportaton*	PI	Total: $150,015 My amount: $150,015	08/2020 – 07/2021
CSET	*Developing Pedestrian Safety Data Visualization and Analysis Tool for*	PI	Total: $127,985 My amount: $127,985	08/2020 – 07/2021

	RITI Communities. Center for Safety Equity in Transportaton			
C2Smart	*Cooperative Perception of Road-Side Unit and Onboard Equipment with Edge Artificial Intelligence for Driving Assistance*	PI	Total: $130,000 My amount: $130,000	03/2020 – 07/2021
WSDOT	*Provide Training Services Addressing WSDOT's Workforce Development Needs*	PI	Total: $100,000 My amount: $100,000	12/2019 – 06/2021
NPRA	*Traffic Sensing for E8 Corridor Performance Monitoring and Travel Reliability Enhancement*	PI (Co-PI, McCormack)	Total: $261,326 My amount: $216,326	03/2018 – 09/2021
WSDOT and PacTrans	*Impacts of Homeless Encampments on Roadway Safety and DOT Policy. Washington State Department of Transportation and PacTrans*	PI	Total: $30,000 My amount: $30,000	03/2020 – 09/2020
PacTrans	*Curb Space Monitoring and Management using Mobile Unit for Sensing Traffic (MUST) Sensors*	PI	Total: $10,000 My amount: $10,000	03/2020 – 09/2020
WSDOT	*Real-Time Truck Parking Information Integration, Visualization and Prediction*	PI	Total: $82,000 My amount: $82,000	09/2019 – 09/2021
NCHRP	*NCHRP 07-26: Update of Highway Capacity Manual: Merge, Diverge, and Weaving Methodologies*	Co-PI(PI, Schoeder, KAI)	Total: $400,000 My amount: $109,354	06/2019 – 12/2021
WSDOT	*Extending the SR-522 SPaT Challenge to Active Transportation Users*	PI	Total: $249,464 My amount: $249,464	10/2018 – 09/2021
CSET	*Developing a Data-Driven Safety Assessment Framework for RITI Communities in Washington State*	PI	Total: $200,000 My amount: $200,000	07/2018 – 09/2019
C2Smart	*An Artificial Intelligence Platform for Network-wide Congestion Detection and Prediction Using Multi-source Data*	PI	Total: $82,000 My amount: $82,000	03/2018 – 02/2019
FHWA	*TOPR HPPI180007: Developing A Geospatial Database Covering Posted Speed Limit Information for the Full Extent of the National Highway System*	Co-PI(PI, Mingo, Mingo & Associates)	Total: $155,000 My amount: $110,000	06/2018 – 01/2019
Seattle DOT	*Verizon Data Quality Assessment. Seattle Department of Transportation*	PI	Total: $11,501 My amount: $11,501	03/2018 – 06/2019
FHWA	*TOPR 33-01-18005: Developing a Statistically Valid and Practical Method to Compute Bus and Truck Occupancy Data*	Co-PI(PI, Mingo, Mingo & Associates)	Total: $106,948 My amount: $70,614	12/2017 – 05/2019
WSDOT	*Tolling Research and Operations*	PI	Total: $120,785 My amount: $120,785	07/2017 – 06/2019
WSDOT	*Traffic Management Center*	PI	Total: $532,915 My amount: $532,915	07/2017 – 06/2019

FTA	*Pierce Transit Collision Avoidance and Mitigation Safety Research and Demonstration System*	Co-PI(PI, Lutin, Independent Consultant)	Total: $1,600,000 My amount: $354,353	12/2017 – 09/2021
Sound Transit	*A Multi-Sensor Solution for Sound Transit Parking Space Detection*	PI	Total: $100,055 My amount: $100,055	07/2017 – 12/2018
PacTrans	*Development of PacTrans Workforce Development Institute Phase I*	PI (Co-PIs Chang, UI; Connor, UAF; Brown, OSU; & Jessup, WSU)	Total: $525,000 My amount: $129,000	09/2017 – 09/2020
PacTrans	*A Connected Vehicle-based Adaptive Vehicle Rounding Algorithm*	PI (Co-PI, Zeng)	Total: $36,000 My amount: $36,000	07/2018 – 06/2019
ARC	*Improving Road Network Operations under Non-Recurrent Events*	Co-PI (PI, Wu, Curtin U.)	Total: AU$275,295 My amount: AU$36,000	09/2017 – 09/2020
CSET	*Develop a Regional Multi-Source Database System for Safety Data Management and Analysis in RITI Communities in Washington State*	PI ICo-PI, Zeng)	Total: $200,000 My amount: $200,000	12/2018 – 12/2018
CSET	*Promoting CSET Outreach Activities through Safety Data Management and Analysis in RITI Communities. Center for Safety Equity in Transportation (CSET)*	PI ICo-PI, Zeng)	Total: $105,000 My amount: $105,000	12/2018 – 12/2018
PacTrans	*DRIVE Net II: Online Moving Washington Platform for Network-Wide System Operations, Monitoring, and Analysis*	PI	Total: $20,000 My amount: $20,000	03/2018 – 08/2018
PacTrans	*A V2X Communication System for Enhancing Vehicle, Bicyclist, and Pedestrian Safety*	PI	Total: $15,000 My amount: $15,000	03/2018 – 08/2018
PacTrans	*Smart Road Node: A Novel Multisource Traffic Sensor: Mobile Unit for Sensing Traffic (MUST) version 2*	PI	Total: $30,000 My amount: $30,000	03/2018 – 08/2018
PacTrans	*Vehicle-Pedestrian Near-Miss Detection Using Onboard Monocular Video Data*	PI	Total: $30,000 My amount: $30,000	03/2018 – 08/2018
Seattle DOT	*Performance Measurement for a Selected Pilot Urban Corridor in Seattle*	PI	Total: $30,000 My amount: $30,000	06/2017 – 09/2017
PacTrans	*Vehicle-Pedestrian Near-Miss Detection Using Onboard Monocular Video Data*	Co-PI (PI, Shi, WSU)	Total: $180,000 My amount: $60,000	09/2017 – 12/2018
USDOT	*Regional Center: Pacific Northwest Transportation Consortium (PacTrans)*	PI (Co-PIs, Moudon and Ban)	Total: $13,750,000 Center grant for the seven consortium universities	01/2017 – 09/2023
USDOT	*Tier One Center: Center for Safety Equity in Transportation (CSET): Transportation Safety for Rural,*	Co-PI (PI, Connor, UAF)	Total: $13,750,000	01/2017 – 09/2023

	Isolated, Tribal, and Indigenous Communities		Center grant for the four consortium universities	
SEIRI	*Data-Driven Analytical Platform for Traffic Emission Inventory: Framework and Algorithms Development*	PI	Total: $100,000 My amount: $100,000	09/2017 – 09/2021
FHWA	*Reliability Data Guide – Procedures for Using Data in Travel Time Reliability Analyses*	Co-PI (PI, Ma, Leidos)	Total: $170,000 My amount: $67,983	10/2016 – 09/2018
PacTrans	*Freeway Traffic Safety and Efficiency Enhancement through Adaptive Roadway Lighting and Control Enabled by Connected Sensor and Infrastructure Networks*	PI (Co-PI, Wang, OSU)	Total: $180,000 My amount: $100,000	12/2016 – 12/2017
PacTrans	*Developing a cost-effective bus-to-pedestrian near-miss detection method using onboard video camera data*	PI (Co-PI, Zhang)	Total: $46,080 My amount: $46,080	12/2016 – 12/2017
SHRP 2	*Reliability Data and Analysis Tools (L02/L07/L08/C11/L05)*	Co-PI (PI, Nisbet, WSDOT)	Total: $100,000 My amount: $100,000	11/2016 – 11/2017
WSDOT	*Freeway Traffic Safety and Efficiency Enhancement through Adaptive Lighting and Control Enabled by Connected Sensor and Infrastructure Networks*	PI	Total: $100,000 My amount: $100,000	07/2015 – 06/2017
SHRP 2	*TRAC FLOW Migration to DRIVE Net*	PI	Total: $129,895 My amount: $129,895	09/2015 – 06/2016
USDOT	*Regional Center: Pacific Northwest Transportation Consortium (PacTrans)*	PI (Co-PI, Boyle)	Total: $13,750,000 Center grant for the seven consortium universities	04/2014 – 09/2017
PacTrans	*Developing a Clustering-based Empirical Bayes Analysis Method for Hotspot Identification*	PI (Co-PI, Zou)	Total: $30,000 My amount: $300,000	10/2015 – 09/2016
PacTrans	*Developing a Clustering-based Empirical Bayes Analysis Method for Hotspot Identification*	PI (Co-PI, Hajbabaie, WSU)	Total: $180,000 My amount: $100,000	10/2015 – 09/2016
TRB Transit IDEA	*Active Safety-Collision Warning Pilot in Washington State*	Co-PI (PI, Lutin, Independent Consultant)	Total: $100,000 My amount: $37,500	10/2015 – 01/2017
WSDOT	*Understanding Opportunities with Connected Vehicles in the Smart Cities Context*	PI	Total: $75,000 My amount: $75,000	04/2016 – 06/2017
PacTrans	*Bicycle Safety Analysis: Crowdsourcing Bicycle Travel Data to Estimate Risk Exposure and Create Safety Performance Functions*	Co-PI (PI, Wang, OSU)	Total: $180,000 My amount: $60,000	01/2015 – 06/2016

PacTrans	*Regional Map Based Analytical Platform for State-Wide Highway Safety Performance Assessment*	Co-PI (PI, Hajbabaie, WSU)	Total: $180,000 My amount: $80,000	10/2015 – 09/2016
Innova	*Innova University Electric Vehicle Campus Project Award*	PI (Co-PIs, Arabshahi and Kirschen)	Total: $10,000 + four Urban EVs My amount: $10,000	09/2014 – 09/2015
FHWA	*TOPR 33-01-14034: Highway Grade Characterization and Operating Efficiency Methods, Tools and Data Development*	PI (Co-PI, Minggo, Minggo & Associates)	Total: $386,742 My amount: $267,706	05/2014 – 02/2016
WSDOT	*Error Assessment for Emerging Traffic Data Collection Devices (Phase II)*	PI	Total: $40,000 My amount: $40,000	07/2014 – 06/2015
CNSF	*Urban Road Network Planning and Control Methods Using Multi-Source Traffic Sensor and IoT Data*	PI (Co-PIs, An, HIT; Wu, Tongji U; Li, Tsinghua U)	Total: $325,000 My amount: $125,000	01/2014 – 12/2017
PacTrans	*Improving Pedestrian and Bicycle Safety by Identifying Critical Intersections and Street Segments*	Co-PI (PI, Lowry, UI)	Total: $200,000 My amount: $75,000	07/2013 – 10/2014
WSDOT	*DRIVE Net Phase II: Online Platform for Network-Wide System Operations, Monitoring, and Analysis*	PI	Total: $250,000 My amount: $250,000	07/2013 – 06/2015
WSDOT	*Study on Illumination for State Highways*	PI	Total: $125,000 My amount: $125,000	07/2013 – 06/2015
WSDOT	*Development of Mobile Sensor based Pedestrian Routing Module on DRIVE Net*	PI	Total: $70,000 My amount: $70,000	04/2013 – 06/2013
SHRP 2	*SHRP2L38: Pilot Testing of SHRP 2 Reliability Data and Analytical Products*	Co-PI (PI, Nisbet, WSDOT)	Total: $350,000 My amount: $350,000	04/2013 – 06/2013
USDOT	*Regional Center: Pacific Northwest Transportation Consortium (PacTrans)*	PI (Co-PI, Boyle)	Total: $3,397,600 Center grant for the seven consortium universities	11/2012 – 01/2016
WSDOT and PacTrans	*Error Assessment for Emerging Traffic Data Collection Devices*	PI	Total: $60,000 My amount: $60,000	05/2012 – 11/2013
PacTrans	*Seeing the Complete Picture to Achieve Safety and Community Livability: Integrating Data from Multiple Sources, Including Video and High-Resolution Detector Data, to Improve Arterial Operations for All Users*	Co-PI (PI, Dixon, UI)	Total: $240,000 My amount: $35,000	04/2012 – 10/2013
NCHRP	*NCHRP 03-107: Work Zone Capacity Methods for the Highway Capacity Manual*	Co-PI (PI, Schoen, KAI)	Total: $600,000 My amount: $120,000	04/2012 – 09/2014
USDOT	*Regional Center: Pacific Northwest Transportation Consortium (PacTrans)*	PI (Co-PI, Boyle)	Total: $3,500,000	11/2012 – 02/2014

			Center grant for the seven consortium universities	
FHWA	*Development of Methods for Enhancing Travel Origin Destination Data*	PI (Co-PI, Minggo, Minggo & Associates)	Total: $286,137 My amount: $159,438	06/2011 – 11/2012
FHWA	*Clean-up of Existing Data Sets to Support Dynamic Mobility Applications Development*	Co-PI (PI, Hallenbeck)	Total: $200,000 My amount: $100,000	07/2011 – 12/2011
TransNow	*Occlusion Robust and Environment Insensitive Algorithm for Vehicle Detection and Tracking Using Surveillance Video Cameras*	PI	Total: $7,500 My amount: $7,500	06/2011 – 06/2012
TransNow	*Development of a Statewide Online System for Traffic Data Quality Control and Sharing*	PI	Total: $7,500 My amount: $7,500	06/2011 – 06/2012
TransNow	*Error Modeling and Analysis for Travel Time Data Obtained from Bluetooth MAC Address Matching*	PI	Total: $7,500 My amount: $7,500	06/2011 – 06/2012
WSDOT	*Migration of Operations Datamart to DRIVE Net*	PI (Co-PI, Hallenbeck)	Total: $200,000 My amount: $100,000	07/2011 – 09/2013
TransNow	*Developing a Performance Measurement Framework and Selection Guidelines for Advanced Traffic Signal Systems*	PI	Total: $96,000 My amount: $96,000	09/2011 – 06/2013
CNSF OCRP	*Urban Expressway Incident Management Strategies Based on Traffic Sensor Measurements*	PI (Co-PI, An, HIT)	Total: $29,850 This is an oversea collaboration project.	09/2010 – 08/2012
Oregon DOT	*Criteria for the Selection and Application of Advanced Traffic Signal Systems*	PI	Total: $178,000 My amount: $178,000	09/2010 – 12/2011
WSDOT	*SR-167 HOT Lanes: Usage and Compliance Metrics*	Co-PI (PI, Hallenbeck)	Total: $30,566 My amount: $26,038	09/2010 – 03/2011
TransNow	*Perceived and Actual Wait Time Measurement at Transit Stops Using Bluetooth*	Co-PI (PI, Rutherford)	Total: $43,402 My amount: $21,701	07/2010 – 06/2011
TransNow	*Simulation-Based Testbed Development for Analyzing Toll Impacts on Freeway Travel*	PI	Total: $75,000 My amount: $75,000	10/2009 – 09/2012
Seattle DOT	*Arterial Signal Optimization Based on Integrated Corridor Management (ICM) Implementation*	PI	Total: $75,000 My amount: $75,000	10/2009 – 09/2012
TransNow	*Identifying High Risk Locations of Animal-Vehicle Collisions for Future Road Ecology*	PI	Total: $64,869 My amount: $64,869	07/2009 – 06/2010
TransNow	*Modeling and Analysis for Travel Time Data Obtained from Bluetooth MAC Address Matching*	PI	Total: $81,200 My amount: $81,200	07/2009 – 06/2010

WSDOT	*Error Modeling and Analysis for Travel Time Data Obtained from Bluetooth MAC Address Matching*	PI	Total: $132,000 My amount: $132,000	04/2009 – 12/2011
NCHRP	*NCHRP03-96: Analysis of Managed Lanes on Freeway Facilities, Cooperative Highway Research Program*	PI (Co-PI, Rouphail, NCSU)	Total: $350,000 My amount: $200,000	04/2009 – 10/2011
WSDOT	*Quantifying Incident-Induced Travel Delays on Freeways (Phase II)*	PI	Total: $132,000 My amount: $132,000	07/2008 – 06/2010
TransNow	*Real-Time Travel Time Prediction on Urban Traffic Network*	PI	Total: $123,208 My amount: $123,208	07/2008 – 06/2010
TransNow	*A Microscopic Approach for Quantifying Recurrent and Non-Recurrent Delays on Freeways*	PI	Total: $101,053 My amount: $101,053	07/2008 – 06/2010
TransNow	*Low-Cost, Distributed-Sensor-Based Weigh-In-Motion Systems*	Co-PI (PI, Miller and Co-PI, P. Mackenzie)	Total: $38,737 My amount: $8,000	07/2008 – 06/2009
WSDOT	*Quantitative Analysis of Vehicle-Animal Collisions*	PI	Total: $75,000 My amount: $75,000	02/2008 – 12/2009
WSDOT	*Side-by-side Evaluation of VVDC and Citilog's Media TD Video Detection Systems*	PI	Total: $5,000 My amount: $5,000	05/2007 – 06/2007
EPA	*Evaluation of Methods for Air Toxics Source Apportionment Using Real-Time Continuous Monitoring Instruments*	Co-PI (PI, Yost; Co-PIs, Larson and Simpson	Total: $449,841 My amount: $100,000	04/2008 – 11/2009
TransNow	*Development of a Statewide Traffic Data System*	PI (Co-PI, Hallenbeck)	Total: $120,000 My amount: $100,000	07/2007 – 06/2009
TransNow	*A Self-Adaptive Toll Rate Algorithm for High Occupancy Toll (HOT) Lane Operations*	PI	Total: $71,000 My amount: $71,000	07/2007 – 06/2009
WSDOT	*Development of a Consistent and Reliable Statewide Traffic Datamart Based on Customers Needs and Expectations*	PI (Co-PI, Hallenbeck)	Total: $200,000 My amount: $100,000	07/2007 – 06/2008
HEI	*Integrated Epidemiologic and Toxicologic Cardiovascular Studies to Identify Toxic Components and Sources of Fine Particulate Matter*	Co-PI (PI, Vedal; Co-PIs, Kaufmann, Larson, et al.)	Total: $3,851,000 My amount: $40,000	09/2006 – 08/2010
TransNow	*Occlusion Robust Vehicle Tracking Using Motion-based Features*	PI	Total: $108,000 My amount: $108,000	06/2007 – 07/2008
TransNow	*Measuring Arterial Performance Using Vehicle Fleet GPS Data and Traffic Sensor Data*	PI (Co-PI, Hallenbeck)	Total: $25,000 My amount: $10,000	07/2006 – 06/2007
TransNow and WSDOT	*Traffic Simulation Lab*	PI (Co-PI, Hallenbeck)	Total: $155,000 My amount: $60,000	07/2006 – 06/2007
TransNow	*Developing an Area-Wide System for Coordinated Ramp Meter Control*	PI	Total: $90,000 My amount: $90,000	07/2006 – 06/2008

TransNow	*Measuring Arterial Performance Using Vehicle Fleet GPS Data and Traffic Sensor Data*	PI (Co-PI, Hallenbeck)	Total: $25,000 My amount: $10,000	07/2006 – 06/2007
USDOT	*Puget Sound In-Vehicle Traffic Map Demonstration*	Co-PI (PI, Hallenbeck; Co-PI, Rutherford)	Total: $1,150,000 My amount: $200,000	04/2006 – 09/2009
RRF	*A System Optimization Approach for Traffic Signal Timing at Full-Actuated Intersections*	PI	Total: $22,140 My amount: $22,140	09/2006 – 08/2007
WRF Gift	*LOOP SIMulator (LOOPSIM) for Vehicle Traffic Control*	PI	Total: $10,000 My amount: $10,000	12/2005 – 01/2007
TransNow	*Cost Effective Safety Improvements for Two-Lane Rural Roads*	PI	Total: $45,000 My amount: $45,000	09/2005 – 08/2007
WSDOT	*Estimation of Incident-Induced Travel Delays on Freeways*	PI (Co-PI, Hallenbeck)	Total: $75,000 My amount: $60,000	02/2006 – 01/2008
TransNow	*Estimation of Incident-Induced Travel Delays on Freeways, TransNow*	PI (Co-PI, Hallenbeck)	Total: $90,000 My amount: $75,000	09/2005 – 08/2007
TransNow	*Comprehensive Evaluation of Transit Signal Priority system Impacts Using Field Observed Traffic Data*	PI	Total: $65,000 My amount: $65,000	09/2004 – 08/2006
EPA	*Prospective Study of Atherosclerosis, Clinical Cardiovascular Disease, and Long-Term Exposure to Ambient Particulate Matter and Other Air Pollutants in a Multi-Ethnic Cohort*	Co-PI (PI, Kaufman; Co-PIs, Siscovick, Larson, etc.)	Total: $29,999,090 My amount: $300,000	09/2004 – 08/2014
USDOT	*South Snohomish Regional Transit Signal Priority (SS-RTSP) Evaluation*	Co-PI (PI, Hallenbeck)	Total: $300,000 My amount: $280,000	02/2004 – 09/2007
WSDOT	*Improving Truck and Speed Data Using Paired Single-Loop and Video Sensors*	PI (Co-PI, Nihan)	Total: $90,000 My amount: $81,000	02/2004 – 09/2006
WSDOT	*Improving Dual-Loop Truck (and Speed) Data: Quick Detection of Malfunctioning Loops and Calculation of Required Adjustments*	Co-PI (PI, Nihan)	Total: $90,000 My amount: $50,000	12/2003 – 07/2006
TransNow	*Developing A Portable Long-Vehicle Counter Using Video Image Processing*	PI (Co-PI, Nihan)	Total: $73,920 My amount: $66,528	09/2003 – 02/2006
TransNow	*Improving Dual-Loop Truck (and Speed) Data: Quick Detection of Malfunctioning Loops and Calculation of Required Adjustments*	Co-PI (PI, Nihan)	Total: $73,920 My amount: $40,000	09/2003 – 02/2006
TransNow	*Improved System for Collecting Real-Time Truck Data from Dual-Loop Detectors*	Co-PI (PI, Nihan)	Total: $179,458 My amount: $70,000	09/2001 – 08/2004

WSDOT	*Archived Data Analysis, Washington State Department of Transportation*	Collaborator (PI, Hallenbeck)	Total: $165,000 My amount: $50,000	08/2001 – 06/2003
CNSF	*Evaluation of Infrastructure Damage in the 1991 Anhui Flood*	Co-PI (PI, Zhao)	Total: $7,353 My amount: $6,000	10/1991 – 09/1993

*Note:

ARC: Australia Research Council
C2Smart: Connected Cities with Smart Transportation
CNSF OCRP: China National Science Foundation Oversea Collaboration Research Program
CSET: Center for Safety Equity in Transportation
EPA: Environmental Protection Agency
FHWA: Federal Transit Administration
FTA: Federal Transit Administration
HEI: Health Effects Institute
IUEVCP: Innova University Electric Vehicle Campus Project
NCHRP: National Cooperative Highway Research Program
NPRA: Norwegian Public Roads Administration
NSF: National Science Foundation
PacTrans: Pacific Northwest Transportation Consortium
RCN: Research Council of Norway
RRF: Royalty Research Funds
SEIRI: Sichuan Energy Industry Research Institute
SHRP 2: Strategic Highway Research Program 2
STIC: State Transportation Innovation Council
TransNow: Transportation Northwest Center (Previous Region 10 UTC)
TRB: Transportation Research Board
USDOT: US Department of Transportation
WRF: Washington Research Foundation
WSDOT: Washington State Department of Transportation

Unsponsored research

1. Applications of virtual reality (VR) and augmented reality (AR) for transportation research and training, March 2025 - present, future funding and training needs.
2. Spatial intelligence for traffic crash understanding and reconstruction, December 2024 – present, future funding and public importance.
3. Data collection using unmanned aerial vehicles, Sept. 2014 - present, future funding and public importance.
4. Social media data mining for transportation data extraction, Sept. 2013 - present, future funding and public importance.
5. Traffic data collection from mobile device Bluetooth signals, Sept. 2010 – present, future funding and public importance.
6. Transportation control network security, Mar. 2008 – present, future funding and public importance.

7. Application of computer network theories to roadway networks, Oct. 2002 – present, future funding and public importance.
8. Digital Roadway Interactive Visualization and Evaluation Network (DRIVE Net), Mar. 2009 – 2011, future funding and public importance.
9. Vehicle tracking using video image processing, June 2005 – June 2006, future research development and funding.
10. Traffic accident modeling, Nov. 1998 – June 2005, publications and future funding.
11. Video image processing for traffic data collection, Jan. 2002 – June 2003, future funding and public importance.
12. Internet reachability, Oct. 2002 – May 2003, publication and future funding.

DOCUMENTATION OF TEACHING EFFECTIVENESS

Courses Taught & Student Evaluations

Courses Taught:

Course Number	Course Title	Quarter	Credit Hours	Student Enrollment	Class Evaluations
CET 590	Traffic System Operations	SP26	3	8	Yes
CET 499	Independent Study/Research	WI26	1	1	No
CEE 443	CE Capstone Project	WA26	2	1	Yes
CEE 327	Transportation Engineering	WI26	5	108	Yes
CET 601	Internship	AU24	1	1	No
CEE 327	Transportation Engineering	WI24	5	62	Yes
CEE 601	Internship	WI24	2	2	No
CET 601	Internship	AU23	2	2	No
CEE 327	Transportation Engineering	WI23	5	45	Yes
CEE 601	Internship	WI23	2	1	No
CET 590	Traffic System Operations	AU22	3	6	Yes
CEE 327	Transportation Engineering	WI22	5	65	Yes
CEE 601	Internship	AU21	2	1	No
CEE 327	Transportation Engineering	WI21	5	66	Yes
CET 590	Traffic System Operations	AU20	3	8	Yes
CEE 601	Internship	WI20	2	1	No
CEE 327	Transportation Engineering	WI20	5	75	Yes
CEE 601	Internship	AU19	2	1	No

CEE 601	Internship	SU19	2	1	No
CEE 601	Internship	SP19	2	2	No
CEE 327	Transportation Engineering	SP19	5	77	Yes
CEE 601	Internship	WI19	2	2	No
CEE 590	Traffic System Operations	AU18	3	9	Yes
CEE 327	Transportation Engineering	SP18	5	70	Yes
CEE 601	Internship	SP18	3	2	No
CEE 601	Internship	WI18	4	2	No
CEE 601	Internship	AU17	2	2	No
CEE 601	Internship	SP17	2	2	No
CEE 601	Internship	WI17	2	2	No
CEE 601	Internship	AU16	2	2	No
CEE 601	Internship	SU16	2	1	No
CEE 601	Internship	SP16	2	4	No
CEE 327	Transportation Engineering	SP16	5	71	Yes
CEE 601	Internship	WI16	2	5	No
CEE 601	Internship	AU15	2	5	No
CEE 590	Traffic Systems Operation	AU15	3	21	Yes
CEE 601	Internship	SU15	2	1	No
CEE 327	Transportation Engineering	SP15	5	63	Yes
CEE 601	Internship	SP15	2	4	No
CEE 601	Internship	WI15	2	6	No
CEE 601	Internship	AU14	2	6	No
CEE 594	Computer-Aided Construction	SU14	3	11	Yes**
CEE 601	Internship	SP14	2	4	No
CEE 327	Transportation Engineering	SP14	5	71	Yes
CEE 601	Internship	WI14	2	4	No
CEE 590	Traffic Systems Operation	AU13	3	12	Yes
CEE 601	Internship	AU13	2	4	No
CEE 594	Computer-Aided Construction	SU13	3	17	Yes**
CEE 500	Transportation Seminar	SP13	1	19	No
CEE 601	Internship	SP13	2	3	No

CEE 327	Transportation Engineering	SP13	5	44	Yes
CEE 601	Internship	WI13	2	3	No
CEE 601	Internship	AU12	2	5	No
CEE 500	Transportation Seminar	AU12	1	19	No
CEE 594	Computer-Aided Construction	SU12	3	17	Yes**
CEE 412	Transportation Data Management and Analysis	WI12	3	33	Yes
CEE 599	Transportation Data Management and Analysis	WI12	3	9	Yes
CEE 590	Traffic Systems Operation	AU11	3	10	Yes
CEE 320	Transportation Engineering	SP11	3	64	Yes
CEE 412	Transportation Data Management and Analysis	WI11	3	44	Yes
CEE 599	Transportation Data Management and Analysis	WI11	3	6	Yes
CEE 590	Traffic Systems Operation	AU10	3	16	Yes
CEE 594	Computer-Aided Construction	SU10	3	12	Yes**
TU	Traffic Systems Operation	SP10	3	16	Yes**
CEE 594	Computer-Aided Construction	SU09	3	16	Yes**
CEE 320	Transportation Engineering	SP09	3	57	Yes
CEE 412	Transportation Data Management and Analysis	WI09	3	40	Yes
CEE 599D	Transportation Data Management and Analysis	WI09	3	10	Yes
CEE 590	Traffic Systems Operation	AU08	3	20	Yes
CEE 594	Computer-Aided Construction	SU08	3	11	Yes**
CEE 590	Traffic Systems Operation	SP08	3	13	Yes
CEE 500D	Transportation and Construction Seminar	SP08	1	30	No
CEE 412	Transportation Data Management and Analysis	WI08	3	32	Yes
CEE 599D	Transportation Data Management and Analysis	WI08	3	12	Yes
CEE 320	Transportation Engineering I	AU07	3	45	Yes
CEE 594	Computer-Aided Construction	SU07	3	9	Yes**

CEE 590+	Traffic Systems Operation	SP07	3	11	Yes
CEE 498A+	Traffic Systems Operation	SP07	3	9	Yes
CEE 599D	Transportation Data Management and Analysis	WI07	3	9	Yes
CEE 412	Transportation Data Management and Analysis	WI07	3	18	Yes
CEE 320	Transportation Engineering I	AU06	3	60	Yes
CEE 594	Computer-Aided Construction	SU06	3	15	Yes**
CEE 320	Transportation Engineering I	SP06	3	40	Yes
CEE 500C	Transportation and Construction Seminar	AU05	1	18	No
CEE 599A	Transportation Data Management and Analysis	AU05	3	7	Yes
CEE 412	Transportation Data Management and Analysis	AU05	3	22	Yes
CEE 599TU	Computer-Aided Construction	SU05	3	6	Yes**
CEE 320+	Transportation Engineering I	SP05	3	52	Yes
CEE 500E	Transportation and Construction Seminar	AU04	1	20	No
CEE 599D	Transportation Data Management and Analysis	AU04	3	10	Yes
CEE 498D	Transportation Data Management and Analysis	AU04	3	8	Yes
CEE 599TU*	Computer-Aided Construction	SU04	3	10	Yes**
CEE 599F	Advanced Traffic Detection Systems	SP04	3	6	Yes
CEE 599D	Transportation Data Management and Analysis	AU03	3	9	Yes
CEE 498D*	Transportation Data Management and Analysis	AU03	3	6	Yes
CEE 599F*	Advanced Traffic Detection Systems	SP03	3	10	Yes

* New course.
+ Teach in the first time and significantly revised the course content
** UWEO or other evaluation system

Student Evaluations:

Course Number	Course Title	Quarter	No of Resp.	Item 1*	Item 2*	Item 3*	Item 4*
CEE 327	Transportation Engineering	WI26	106/108	3.3 (3.7)	3.3 (3.6)	3.4 (3.7)	3.1 (3.5)
CEE 327	Transportation Engineering	WI24	34/62	3.4 (3.6)	3.5 (3.7)	3.9 (4.1)	3.5 (3.7)
CEE 327	Transportation Engineering	WI23	29/45	3.5 (3.7)	3.3 (3.5)	3.8 (4.0)	3.3 (3.5)
CET 590	Traffic System Operations	AU22	5/6	4.7 (4.5)	4.9 (4.7)	4.9 (4.7)	4.9 (4.7)
CEE 327	Transportation Engineering	WI22	37/65	3.9 (4.1)	3.7 (3.8)	4.3 (4.5)	4.2 (4.4)
CEE 327	Transportation Engineering	WI21	34/66	3.8 (3.9)	3.6 (3.6)	4.0 (4.1)	3.9 (4.0)
CET 590	Traffic System Operations	AU20	8/8	4.8 (4.4)	4.8 (4.6)	4.9 (4.6)	4.9 (4.6)
CEE 327	Transportation Engineering	WI20	38/75	4.2 (4.2)	4.4 (4.4)	4.1 (4.2)	4.2 (4.2)
CEE 327	Transportation Engineering	SP19	54/77	3.7 (3.9)	4.1 (4.3)	4.0 (4.3)	3.9 (4.1)
CEE 590	Traffic System Operations	AU18	9/9	4.8 (4.6)	4.9 (4.7)	4.8 (4.6)	4.7 (4.5)
CEE 327	Transportation Engineering	SP18	50/70	3.6 (3.9)	3.7 (4.0)	3.5 (3.9)	3.6 (3.9)
CEE 327	Transportation Engineering	SP16	58/71	4.0 (3.9)	4.4 (4.3)	4.2 (4.1)	4.2 (4.1)
CEE 590	Traffic System Operations	AU15	21/21	4.3 (4.4)	4.3 (4.4)	4.4 (4.5)	4.3 (4.4)
CEE 327	Transportation Engineering	SP15	48/63	4.1 (4.0)	4.4 (4.3)	4.2 (4.1)	4.2 (4.1)
CEE 327	Transportation Engineering	SP14	50/71	3.7 (3.7)	4.0 (3.9)	3.8 (3.7)	3.8 (3.7)
CEE 590	Traffic System Operations	AU13	11/12	4.4 (4.8)	4.3 (4.7)	4.3 (4.7)	4.3 (4.7)
CEE 327	Transportation Engineering	SP13	34/44	3.5 (3.5)	4.1 (4.1)	3.4 (3.5)	3.5 (3.4)
CEE 412/599	Transportation Data	WI12	31/42	4.1 (4.3)	4.5 (4.7)	4.2 (4.4)	4.3 (4.4)

	Management and Analysis						
CEE 590	Traffic System Operations	AU11	10/10	4.4 (4.7)	4.5 (4.7)	4.4 (4.7)	4.4 (4.7)
CEE 320	Transportation Engineering I	SP11	44/64	3.8 (4.0)	4.3 (4.4)	4.2 (4.3)	4.0 (4.1)
CEE 412	Transportation Data Management and Analysis	WI11	25/44	3.9 (4.1)	3.9 (4.1)	3.6 (3.8)	3.8 (4.0)
CEE 599	Transportation Data Management and Analysis	WI11	4/6	3.1 (3.5)	3.7 (4.0)	3.2 (3.5)	3.2 (3.5)
CEE 590	Traffic System Operations	AU10	16/16	3.6 (4.0)	3.7 (4.0)	3.6 (3.9)	3.7 (4.0)
CEE 320	Transportation Engineering I	SP09	36/57	4.3 (4.3)	4.4 (4.5)	4.2 (4.3)	4.3 (4.3)
CEE 412/599	Transportation Data Management and Analysis	WI09	36/50	4.0 (3.9)	4.6 (4.5)	4.3 (4.2)	4.2 (4.1)
CEE 590	Traffic System Operations	AU08	20/20	4.8 (4.8)	4.9 (4.9)	4.7 (4.6)	4.7 (4.7)
CEE 590	Traffic System Operations	SP08	12/13	3.8 (4.2)	3.7 (3.9)	3.6 (3.9)	3.7 (4.0)
CEE 599D	Transportation Data Management and Analysis	WI08	16/12	4.3 (4.6)	4.3 (4.5)	3.9 (4.2)	4.1 (4.4)
CEE 412	Transportation Data Management and Analysis	WI08	24/32	3.4 (3.5)	4.0 (4.1)	3.6 (3.6)	3.6 (3.7)
CEE 320	Transportation Engineering I	AU07	44/54	4.1 (4.3)	4.5 (4.6)	4.2 (4.4)	4.2 (4.4)
CEE 498A	Traffic System Operations	SP07	6/9	4.0 (4.5)	4.1 (4.5)	4.0 (4.5)	3.8 (4.3)
CEE 590	Traffic System Operations	SP07	12/11	3.6 (4.2)	3.7 (4.2)	3.4 (3.9)	3.5 (4.0)

CEE 599D	Transportation Data Management and Analysis	WI07	8/9	3.5 (4.0)	4.1 (4.5)	3.7 (4.2)	3.8 (4.2)
CEE 412	Transportation Data Management and Analysis	WI07	15/18	3.6 (4.0)	4.5 (4.8)	4.0 (4.3)	4.0 (4.3)
CEE 320	Transportation Engineering I	AU06	50/60	3.8 (3.9)	4.2 (4.3)	3.8 (3.9)	3.8 (4.0)
CEE 320	Transportation Engineering I	SP06	25/38	4.0 (4.3)	4.3 (4.7)	3.9 (4.3)	4.1 (4.4)
CEE 599A	Transportation Data Management and Analysis	AU05	7/6	4.0 (4.6)	4.3 (4.8)	4.2 (4.8)	4.1 (4.7)
CEE 412	Transportation Data Management and Analysis	AU05	18/22	4.0 (4.4)	4.3 (4.6)	4.2 (4.6)	4.1 (4.5)
CEE 320	Transportation Engineering I	SP05	28/52	4.6 (4.7)	4.6 (4.7)	4.2 (4.3)	4.4 (4.5)
CEE 599D	Transportation Data Management and Analysis	AU04	7/10	4.0 (4.3)	4.7 (4.9)	4.3 (4.5)	4.4 (4.7)
CEE 498D	Transportation Data Management and Analysis	AU04	10/8	3.7 (4.1)	3.9 (4.3)	3.1 (3.5)	3.6 (4.0)
CEE 599F	Advanced Traffic Detection Systems	SP04	6/6	4.1 (4.8)	4.0 (4.5)	4.2 (4.8)	4.1 (4.6)
CEE 599D	Transportation Data Management and Analysis	AU03	8/9	3.5 (4.1)	4.2 (4.7)	3.6 (4.1)	3.7 (4.3)
CEE 498D	Transportation Data Management and Analysis	AU03	7/6	3.4 (4.0)	3.8 (4.3)	3.5 (4.0)	3.5 (4.0)

CEE 599F	Advanced Traffic Detection Systems	SP03	10/10	3.5 (3.8)	3.9 (4.2)	3.5 (3.8)	3.6 (3.9)

Note:
CEE 412 (previously 498D) and CEE 599D meet jointly.
Item 1 = The course as a whole was
Item 2 = The course content
Item 3 = The instructor's contribution to the course was:
Item 4 = The instructor's effectiveness in teaching this subject matter was:
All those reported in the last four columns (Item 1, Item 2, Item 3, and Item 4) are unadjusted medians with adjusted medians in parentheses.

Supervision of independent study (design projects and research)

Total number of students advised: 30

Student	Research Topic	Quarter	
Tin Vo	Data Extraction from PDF	WI26	1
Peter Yu	Signalized Intersection Design	WI22	4
Sam Ricord	Calculating Travel Time Across Different Travel Modes Using Bluetooth and WiFi Sensing	WI19	3
Sam Ricord	Trajectory Analysis Using MAC Address Data	AU18	3
Nikolas Hendricks	Develop of a Contractor Database	SP18	2
Yihong Zou	Development of Mobile Traffic Information App	AU15	2
Jonathan Karta	Offering User Help Information on the DRIVE Net Platform	SP15	3
Faisal Sheikh	Impacts of Special Events on Travel Time Reliability on Puget Sound Freeway Network	SP15	5
Sreenath Gangula	Evaluation of WSDOT's Maximum Throughput Criteria for Highway Performance Measurement	AU12	3
Carmen Kwan	Simulation Investigation on Integrated Corridor Management	WI12	3
Zhuohong Shen	MAC Address Detection Using Android Phone	SP11	3
Melyssa Nagamine	Mobile-Device Based Pedestrian Data Analysis	WI11	1
Zhuohong Shen	MAC Address Detection Using Android Phone	WI11	2
Aaron Knight	Linking Roadway Network for DriveNet	SP10	2

Kadri Mufti	Time Series Analysis Methods Comparison	SP10	3
Basma Makari	Individual Vehicle Speed Data Analysis	WI09	2
Nghia Duc Pham	Loop Detector Data Quality Analysis	SP07	2
Yegor Malinovskiy	Model-Free Pedestrian Tracking	WI07	2
Christopher Corpuz Dela Pena	Simulation of Incident-Induced Delay	AU06	3
Ngan Ha Nguyen	Two-lane Traffic Accident Data Management	SU06	2
Torbjorn R. Stenbeck	Pavement Maintenance Cost Modeling (CEE600)	SU06	5
Yegor Malinovskiy	Pedestrian Tracking Using Video Image Processing	SP06	3
Nicholas Richard Wilson	Hardware-in-the-Loop Simulation	SP06	3
Torbjorn R. Stenbeck	Pavement Maintenance Cost Modeling (CEE600)	SP06	5
Quang Dai Nguyen	Ramp Meter Control Models	SP06	5
Chun Wah Wen	Video detector evaluation	WI06	2
Torbjorn R. Stenbeck	Pavement Maintenance Cost Analysis (CEE600)	WI06	5
Takashi Baba	Traffic simulation models	SP05	3
Man-Hei Ng	Video-based traffic data collection	SP05	1
Basma Makari	WSDOT traffic flow map reorganization	WI05	3
Thong Mai	Transportation data management systems	WI05	3
Arianne Reidinger	Ramp meter control efficiency	SP04	4

List of other teaching contributions

Teaching workshops attended:
College of Engineering Workshop on Advising and Mentoring Graduate Students (Dec. 2004)
College of Engineering New Faculty Workshop (Sept. 2003)
Eighth Annual Faculty Workshops on Teaching and Learning (Aug. 2003)
College of Engineering Grant Writing Workshop (Feb. 2003)
Catalyst's "Quizzes and Surveys Using WebQ" Workshop (Sept. 2002)
Educating the 21st Century Transportation Professional Conference (July 1999)

Other workshops attended:
College of Engineering NSF Presentation by Dr. Michael Reischman (Nov. 2007)
College of Engineering Workshop on "Nuts and Bolts of Managing a Research Lab" (May 2005)

NSF Civil and Mechanical Systems' Infrastructure & Information Systems (IIS) Proposal Workshop. (Apr. 2005)
College of Engineering NSF Career Grant Writing Workshop (Apr. 2005)
College of Engineering NSF Career Proposal Writing Workshop (May 2004)
College of Engineering Grant Writing Workshop (Feb. 2004)
ADVANCE Leadership Workshop (Oct. 2003)

Seminar Organized:
PacTrans Seminar (Sept. 2012 – present)
TransNow ITS Group Weekly Seminar (Sept. 2001 – Aug. 2003)
STAR Lab Weekly Seminar (Sept. 2003 – present)

Short Courses Taught:
Introduction to Artificial Intelligence, PacTrans Workforce Development Institute Training Course, Seattle, February 25, 2026.
Introduction to Artificial Intelligence, PacTrans Workforce Development Institute Training Course, Seattle, April 29, 2025.
Transportation Challenges and Opportunities, PacTrans Workforce Development Institute Training Course, Seattle, November 2019.
Traffic Sensing and Data Analysis, Southeast University, China, March 2013.
Traffic System Operations, Tsinghua University, China, April 2010.
Traffic Data Sensing, Harbin Institute of Technology, China, August 2008.
Traffic Signal Control Technologies, Dalian University of Technology, China, August 2007.
Traffic Detection Systems Introduction, Tsinghua University, China, August 2004.

Other supporting documents

Courses Developed:
CEE 579: Advanced Traffic Detection Systems
CEE 412: Transportation Data Management and Analysis
CEE 594: Computer-Aided Construction
CEE 590: Traffic System Control and Simulation

Laboratory under Development:
Smart Transportation Applications and Research Laboratory (STAR Lab).

Teaching Awards, Nominations for Teaching Awards
2026 Outstanding Education Award from ITE Western District
2018 ITE Education Council Innovations in Education Award

Teaching Awards at the University of Washington:
2024 CEE Mentor Award

Nominations for Teaching Awards at the University of Washington:
College of Engineering Community of Innovators Award, 2012.
College of Engineering Faculty Innovator: Teaching and Learning Award, 2009.
Second place in the CEE Best Teaching Award, 2008.

Marsha L. Landolt Distinguished Graduate Mentor Award, 2006.
University of Washington Excellence in Teaching Award, 2005.

UNIVERSITY AND COMMUNITY SERVICES

Departmental service
Community Committee, 2025 -
Diversity, Equity, and Inclusion Committee, 2023 - 2025
Undergraduate Education Committee, 2021 - 2023
CEE Executive Committee, 2019 - 2022
Graduate Education Committee, 2020 - 2021
Faculty affairs committee member, 2018 - 2020
Graduate education committee member, 2017 - 2019
Undergraduate education committee member, 2013 - 2016.
Mentor committee member for Dr. Don MacKenzie, 2013 - present.
Mentor committee member for Dr. Steve Muench, 2013 - 2019.
Search committee chair for the Transportation Engineering position, 2012-2013.
Mentor committee chair for Dr. Cynthia Chen, 2012 - 2016.
Mentor committee member for Dr. Linda Boyle, 2012 - 2014.
Mentor committee chair for Dr. Ed McCormack, 2009 - present.
Mentor committee chair for Dr. Erkan Istanbulluoglu, 2011 - 2012.
Mentor committee member for Dr. Jessica Lundquist, 2009 - 2012.
Professorship committee, June 2011 – October 2011.
Search committee chair for the Transportation Engineering position, 2008-2009.
Search committee for the Multi-Hazard Engineering and Sustainable Water Resources positions, 2007-2008.
Search committee for chair of the Department of Civil and Environmental Engineering, 2006-2007.
Strategic hiring committee, 2006-2007.
Engineering open house demonstrations, 2002 – 2006.
Search committee for assistant professors in transportation engineering and hydrology, 2005.
Search committee for assistant professor in construction engineering, 2004.
Search committee for research assistant professor in water resource & hydrology, 2004.

College service
Transportation Visioning Committee Chair, March 2024 – March 2025
Boeing Advanced Research Center Director Search Committee Chair, 2023
Engineering Library Committee, 2004-present.

University service
Director for Washington State Transportation Center (TRAC), Jan. 2024 – present.
Director for Northwestern Tribal Technical Assistance Program Center, USDOT, 2022 – present.
Director for Pacific Northwest Transportation Consortium, USDOT University Transportation Center for Federal Region 10, 2012 – present.
Faculty advisor for ITE Student Chapter at the University of Washington, 2004- present.

Community service

Co-coach, FIRST Tech Challenge (FTC) 18225 High Definition team, April 2022 – April 2024.
Chair of Parents Teacher Association at Northwest Chinese School, June 2002 - May 2003.

All other service

President of Tsinghua Association of Academia Club (TAAC), Jan. 2023 – 2025.
Advisor of the Wisemont Capital, Sept. 2016 - present
Member of Tsinghua Global Innovation eXchange North America Board of Directors, May 2017 – 2020.
Vice President of Tsinghua Association of Academia Club, March 2018 – Feb. 2020.
President of the Association of Tsinghua Alumni in Transportation, Jan. 2008 – Jan. 2010.
Vice president of the Tsinghua Alumni Association in the Greater Seattle Area (2000 – present).
The 15th President of the Chinese Student Association at the Univ. of Tokyo (Apr. 1997-Mar. 1998).