

CURRICULUM VITAE

Songhua Hu, Ph.D.,

Assistant Professor of Transportation Engineering

Department of Architecture and Civil Engineering, City University of Hong Kong, Hong Kong

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Homepage: <https://songhuahu-umd.github.io/>

[Website](#) | [GitHub](#) | [LinkedIn](#) | [Google Scholar](#)

Updated by 04/2026

RESEARCH INTERESTS

Methods:

- **Crowdsourced Data Mining:** Small+Big Data Fusion, Contextual Inference, Sample Bias Correction.
- **Spatiotemporal AI:** Graph Neural Network, Computer Vision, LLM.
- **Network Analysis:** Transportation Network Modeling, Network Science, Network Optimization.
- **Advanced Statistics:** Causal Inference, Nonlinear Regression.

Applications:

- **Transportation Planning:** Travel Demand Modeling, Travel Behavior Analysis, Agent-based Simulation.
- **Policy Evaluation:** Transport Decarbonization, Incentive-based Travel Demand Management.
- **Complex System Resilience:** Urban Multi-system Resilience, Transportation Network Resilience.
- **Environmental Health:** Computational Epidemiology, Human Exposure Modeling, Health Disparity.

EDUCATION

Ph.D. Civil & Environmental Engineering (Transportation), 2019~2023

University of Maryland, College Park, MD, USA

Dissertation: “A big-data-driven framework for spatiotemporal travel demand estimation and prediction.”

Committee: Paul Schonfeld (Chair), Anna Alberini, Ali Haghani, Chenfeng Xiong, Yiqun Xie

GPA: 4.0/4.0

M.S. Communication and Transportation Engineering, 2016~2019

Tongji University, Shanghai, China

Thesis: “Promoting electric vehicle utilization in large-scale carsharing systems.”

GPA: 87/100

B.S. Civil & Environmental Engineering (Transportation), 2012~2016

Huazhong University of Science & Technology, Wuhan, Hubei, China

Thesis: “Simulation of pedestrian flow in metro systems: a dynamic floor-field cellular automata approach.”

GPA: 90/100

RESEARCH/PROPOSAL EXPERIENCE

Assistant Professor of Transportation Engineering, 09/2025~Present

Department of Architecture and Civil Engineering, City University of Hong Kong

Postdoctoral Research Fellow, 06/2023~09/2025

Massachusetts Institute of Technology, Senseable City Lab (PIs: Paolo Santi, Carlo Ratti)

- **CityLLM:** Multi-Agent LLM for Trip Semantic Context Inference and Simulation (Toyota, Japan)
- **ZONE 30:** Citywide ZONE 30 Impact on Traffic Emission and Efficiency (Unipol, Italy)
- **GEMINI:** Digital Twin for Emission Monitoring and Prediction – Kista Case (**SEK 3M**, City of Stockholm)
- **Visual AI Emission:** Reconstruct Citywide Traffic Flow and Emission via Traffic Camera
- Cost-effective AI-enabled Vehicular Carbon Emission Tracking - An Alternative Approach for City Sensing (Proposal submitted to National Science Foundation Cyber-Physical Systems (NSF CPS))

Graduate Research Assistant, 09/2019~06/2023

University of Maryland, College Park (PIs: Paul Schonfeld, Lei Zhang)

- ATCMDT: Deployment of Personalized and Dynamic Travel Demand Management Technology in the Washington D.C.-Baltimore, MD-Richmond, VA Megaregion, 2020~2023 (**\$2,970K**, US Department of Transportation (USDOT))
- Role of Data Streams in Informing Infection Dynamics in Africa (INFORM Africa): Integrated Modeling of Mobility and Epidemiology, 2021~2022 (**\$1,300K**, National Institutes of Health (NIH))
- Next-Gen National Household Travel Survey--National Origin-Destination Data Component, 2020~2022 (**\$2,500K**, Federal Highway Administration (FHWA))
- University of Maryland COVID-19 Impact Analysis Platform (data.covid.umd.edu), 2020~2021 (**\$200K**, National Science Foundation Grants for Rapid Response Research (NSF RAPID))
- Evaluate the Impact of Express Toll Lanes in Maryland with Advanced Travel Demand and Dynamic Traffic Assignment Models, 2019~2020 (**\$150K**, Maryland State Highway Administration (MDOT SHA))
- ARPA-E TRANSNET: Integrated Personal Real-Time Travel Information and Incentive (iPretii, now the incenTrip app), 2019~Present (**\$4,500K**, US Department of Energy (USDOE))

Graduate Research Assistant, 09/2016~06/2019

Tongji University (PIs: Xiaohong Chen, Hangfei Lin)

- A Data-Driven Framework for Station Site Selection, Fleet Management, and Operation Optimization in Large-Scale Electric Carsharing Systems (Evcard), 2018~2019
- Shenzhen Road Flooding Detection Platform Using Traffic Flow Information, 2018
- Shanghai Intelligent Transportation Information Platform, 2017
- Bus Lane Performance Evaluation Using Micro Traffic Simulation, 2016~2017

JOURNAL PUBLICATIONS (*corresponding author; †co-first author)

1. **Hu, S.***, Santi, P., Benson, T., Zhou, X., Wang, A., Kumar, A., & Ratti, C. (2026). Ubiquitous data-driven framework for traffic emission estimation and policy evaluation. *Nature Sustainability*, 1-12.
2. Jostmann, J.†, **Hu, S.†**, Gustaffson, A., Santi, P., Ratti, C., & Ma, Z. (2026). Digital Twin for urban car traffic emission: A case study in Kista, Stockholm. *Journal of Intelligent and Connected Vehicles*.
3. Li, L.†, **Hu, S.†**, Dinh, L., & Hemphill, L. (2026). Crowdsourced reviews reveal substantial disparities in public perceptions of parking. *Cities*, 171, 106866.
4. Chen, B., **Hu, S.**, Xu, X., Wang, G., Lee, D. H., & He, Z. (2026). A survey of multi-modal urban transportation network resilience: modeling, evaluation, and optimization. *Transportation Research Part E: Logistics and Transportation Review*, 207, 104634.
5. **Hu, S.†**, Orsi, G.†, Santi, P., Wang, A., Fugiglando, U., & Ratti, C. (2025). Evaluating the impact of zone 30 policies on citywide road traffic emissions and efficiency: A big data-driven approach. *Transportation Research Part A: Policy and Practice*, 202, 104705.
6. Liu, K., Wu, X., Molnar, L., **Hu, S.**, Zhang, L., & Xiong, C. (2025). Characterizing human mobility and its impact on the spread of COVID-19 during extreme weather events: A case study of hurricane Laura. *Journal of Transport Geography*, 129, 104423.
7. Li, L.†, **Hu, S.†**, Dai, Y., Deng, M., Momeni, P., Laverghetta, G., ... & Hemphill, L. (2025). Toward satisfactory public accessibility: A crowdsourcing approach through online reviews to inclusive urban design. *Computers, Environment and Urban Systems*, 122, 102329.
8. Ma, Z., Hu, G., Lin, T. S., Li, L., **Hu, S.**, Hagen, L., & Baecher, G. B. (2025). Analyzing public response to wildfires: A socio-spatial study using SIR models and NLP techniques. *Computers, Environment and Urban Systems*, 121, 102333.
9. Su, R., Eshiyagh, J., Santi, P., **Hu, S.**, Duarte, F., Mazzarello, M., & Ratti, C. (2025). Determinants of the localized behavior of individual food delivery choices. *Transportation Research Part C: Emerging Technologies*, 178, 105185.
10. Luo, P., Song, C., Li, H., Zhu, D., **Hu, S.**, & Duarte, F. (2025). Modeling shared e-micromobility as a label propagation process for detecting overlapping communities. *Computers, Environment and Urban Systems*, 122,

102336.

11. Chen, P., Yang, X., Zhang, Y., & **Hu, S.** (2025). The resiliency of transit and ride-hailing system through the coronavirus pandemic: Lessons from six large US cities. *Case Studies on Transport Policy*, 20, 101470.
12. Chen, P., & **Hu, S.** (2025). Complementary or Competing? Studying the Relationship between E-Scooter Sharing and Bikesharing in Austin, Texas. *Journal of Planning Education and Research*, 45(4), 824-839.
13. **Hu, S.**, Wang, K., Li, L., Zhao, Y., He, Z., & Zhang, Y. (2024). Multi-crowdsourced data fusion for modeling link-level traffic resilience to adverse weather events. *International Journal of Disaster Risk Reduction*, 112, 104754.
14. **Hu, S.**, Xiong, C., Ji, Y., Wu, X., Liu, K., & Schonfeld, P. (2024). Understanding factors influencing user engagement in incentive-based travel demand management program. *Transportation Research Part A: Policy and Practice*, 186, 104145.
15. Zhao, Y., **Hu, S.**, & Zhang, M. (2024). Evaluating equitable Transit-Oriented development (TOD) via the Node-Place-People model. *Transportation Research Part A: Policy and Practice*, 185, 104116.
16. Li, W., He, Y., **Hu, S.**, He, Z., & Ratti, C. (2024). Planning dynamic wireless charging infrastructure for battery electric bus systems with the joint optimization of charging scheduling. *Transportation Research Part C: Emerging Technologies*, 159, 104469.
17. Xi, H., Nelson, J., Hensher, D., **Hu, S.**, Shao, X., Xie, C., (2024). Evaluating Travel Behavior Resilience across Urban and Rural Areas during the COVID-19 Pandemic: Contributions of Vaccination and Epidemiological Indicators. *Transportation Research Part A: Policy and Practice*, 180, 103980.
18. **Hu, S.**, Xiong, C., Chen, P., Schonfeld, P. (2023). Examining nonlinearity in population inflow estimation using big data: An empirical comparison of explainable machine learning models. *Transportation Research Part A: Policy and Practice*, 174, 103743.
19. **Hu, S.**, & Xiong, C. (2023). High-dimensional population inflow time series forecasting via an interpretable hierarchical transformer. *Transportation research part C: emerging technologies*, 146, 103962.
20. **Hu, S. ***, Xiong, C., Zhao, Y., Yuan, X., & Wang, X. (2023). Vaccination, human mobility, and COVID-19 health outcomes: Empirical comparison before and during the outbreak of SARS-CoV-2 B. 1.1. 529 (Omicron) variant. *Vaccine*.
21. Wei, R., Zhang, Y., Gao, S., Brown, B. J., **Hu, S.**, & Link, B. G. (2023). Health disparity in the spread of COVID-19: Evidence from social distancing, risk of interactions, and access to testing. *Health & place*, 82, 103031.
22. Yang, M., Luo, W., Ashoori, M., Mahmoudi, J., Xiong, C., Lu, J., ... **Hu, S.**, & Ji, Y. (2023). Big-Data Driven Framework to Estimate Vehicle Volume Based on Mobile Device Location Data. *Transportation Research Record*, 03611981231174240.
23. **Hu, S.**, Xiong, C., Li, Q., Wang, Z., & Jiang, Y. (2022). COVID-19 vaccine hesitancy cannot fully explain disparities in vaccination coverage across the contiguous United States. *Vaccine*, 40(37), 5471-5482.
24. **Hu, S.**, Chen, M., Jiang, Y., Sun, W., & Xiong, C. (2022). Examining factors associated with bike-and-ride (BnR) activities around metro stations in large-scale dockless bikesharing systems. *Journal of Transport Geography*, 98, 103271.
25. **Hu, S.**, Xiong, C., Younes, H., Yang, M., Darzi, A., & Jin, Z. C. (2022). Examining spatiotemporal evolution of racial/ethnic disparities in human mobility and COVID-19 health outcomes: Evidence from the contiguous United States. *Sustainable Cities and Society*, 76, 103506.
26. **Hu, S.**, Luo, W., Darzi, A., Pan, Y., Zhao, G., Liu, Y., & Xiong, C. (2021). Do racial and ethnic disparities in following stay-at-home orders influence COVID-19 health outcomes? A mediation analysis approach. *PLoS one*, 16(11), e0259803.
27. **Hu, S.**, Chen, P., & Chen, X. (2021). Do personalized economic incentives work in promoting shared mobility? Examining customer churn using a time-varying Cox model. *Transportation Research Part C: Emerging Technologies*, 128, 103224.
28. **Hu, S.**, Xiong, C., Liu, Z., & Zhang, L. (2021). Examining spatiotemporal changing patterns of bike-sharing usage during COVID-19 pandemic. *Journal of Transport Geography*, 91, 102997.
29. **Hu, S.**, Xiong, C., Yang, M., Younes, H., Luo, W., & Zhang, L. (2021). A big-data driven approach to analyzing and modeling human mobility trend under non-pharmaceutical interventions during COVID-19 pandemic. *Transportation Research Part C: Emerging Technologies*, 124, 102955.
30. **Hu, S.**, & Chen, P. (2021). Who left riding transit? Examining socioeconomic disparities in the impact of COVID-19 on ridership. *Transportation Research Part D: Transport and Environment*, 90, 102654.

31. Zhang, L., Darzi, A., Ghader, S., Pack, M. L., Xiong, C., Yang, M., ... & **Hu, S.** (2021). Interactive COVID-19 mobility impact and social distancing analysis platform. *Transportation research record*, 2677(4), 168-180.
32. Luo, W., Guo, W., **Hu, S.**, Yang, M., Hu, X., & Xiong, C. (2021). Flatten the curve: Empirical evidence on how non-pharmaceutical interventions substituted pharmaceutical treatments during COVID-19 pandemic. *Plos one*, 16(10), e0258379.
33. Xiong, C., **Hu, S.**, Yang, M., Luo, W., & Zhang, L. (2020). Mobile device data reveal the dynamics in a positive relationship between human mobility and COVID-19 infections. *Proceedings of the National Academy of Sciences*, 117(44), 27087-27089.
34. Xiong, C., **Hu, S.**, Yang, M., Younes, H., Luo, W., Ghader, S., & Zhang, L. (2020). Mobile device location data reveal human mobility response to state-level stay-at-home orders during the COVID-19 pandemic in the USA. *Journal of the Royal Society Interface*, 17(173), 20200344.
35. Wang, T., **Hu, S. ***, & Jiang, Y. (2020). Predicting shared-car use and examining nonlinear effects using gradient boosting regression trees. *International Journal of Sustainable Transportation*, 15(12), 893-907.
36. **Hu, S.**, Lin, H., Chen, X., Xie, K., & Shan, X. (2020). Modeling usage frequencies and vehicle preferences in a large-scale electric vehicle sharing system. *IEEE Intelligent Transportation Systems Magazine*, 14(1), 74-86.
37. **Hu, S.**, Chen, P., Xin, F., & Xie, C. (2019). Exploring the effect of battery capacity on electric vehicle sharing programs using a simulation approach. *Transportation Research Part D: Transport and Environment*, 77, 164-177.
38. Chen, P., **Hu, S. ***, Shen, Q., Lin, H., & Xie, C. (2019). Estimating traffic volume for local streets with imbalanced data. *Transportation research record*, 2673(3), 598-610.
39. **Hu, S.**, Chen, P., Lin, H., Xie, C., & Chen, X. (2018). Promoting carsharing attractiveness and efficiency: An exploratory analysis. *Transportation Research Part D: Transport and Environment*, 65, 229-243.

CONFERENCE PRESENTATIONS/POSTERS

1. **Hu, S.**, Orsi, G., Santi, P., Fugiglando, U., Ratti, C., 2024. Understanding the Impact of Zone 30 on City-Wide Road Travel Time and Traffic Emission: A Big-Data-Driven Approach, *TRB (2025)*, Washington DC.
2. Jostmann, J., **Hu, S.**, Gustafsson, A., Santi, P., Ratti, C., Ma, Z., 2024. Digital Twin for Urban Traffic Emission Nowcasting and Forecasting: A Case Study in Kista, Stockholm, *TRB (2025)*, Washington DC.
3. Su, R., Eshdiyagh, J., Santi, P., **Hu, S.**, Duarte, F., Mazzarello, M., Ratti, C., 2024. Determinants of the Localized Behavior of Individual Online Food Delivery Choices, *TRB (2025)*, Washington DC.
4. **Hu, S.**, Santi, P., Zhou, X., Liu, J., Zhao, J., Ratti, C. MPLD2Traffic: A Unified Pipeline to Convert Mobile Phone Location Data to Road Traffic Flow, *NetMob (2024)*, Washington DC.
5. Ma, Z., Baecher, G., Einstein, H., **Hu, S.**, Sousa, R. Unveiling Social Disparities in Landslide Recovery through Multimodal Data Analysis, *NetMob (2024)*, Washington DC.
6. Ye, H., Li, L., **Hu, S.**, Zhan, W. Investigating community equity through franchised fast-food restaurants: A crowdsourcing approach using Google Map Reviews, *INFORMS (2024)*, Seattle, Washington.
7. Ma, Z., Hu, G., Lin, T., Li, L., **Hu, S.**, Baecher, G., 2024. Assessing Inequitable Social Responses to Wildfires: A Case Study of California Using the Epidemiology Model, *AGU (2024)*, Washington DC.
8. Li, L., Lu, Y., **Hu, S.**, Liu, J., Ma, Z., Deng, M., ... & Hemphill, L. Assessing the damage of natural disasters using multimodal large language models and social media crowdsourcing, *AGU (2024)*, Washington DC.
9. **Hu, S.**, Xiong, C., Ya, J., and Schonfeld, P. Understanding factors influencing user engagement in incentive-based travel demand management program, *TRB (2024)*, Washington DC.
10. **Hu, S.**, Wang, K., Li, L., Zhao, Y., He, Z., Zhang, Y. Multimodal Data Fusion for Evaluating the Resilience of Link-level Road Traffic to Extreme Weather Events, *TRB (2024)*, Washington DC.
11. Zhao, Y., **Hu, S.**, Zhang, M. Evaluating Equitable Transit-Oriented Development (TOD) via an Extended Node-Place-Vulnerability Model, *TRB (2024)*, Washington DC.
12. Li, W., He, Y., **Hu, S.**, He, Z. Planning dynamic wireless charging infrastructure for battery electric bus systems with the joint optimization of charging scheduling, *TRB (2024)*, Washington DC.
13. **Hu, S.**, Xiong, C., Chen, P., and Schonfeld, P. Revisiting travel demand using big data: an empirical comparison of explainable machine learning models, *TRB (2023)*, Washington DC.
14. **Hu, S.**, Xiong, C. High-dimensional population flow time series forecasting via an interpretable hierarchical transformer, *TRB (2023)*, Washington DC.
15. **Hu, S.**, Xiong, C., Yuan, X., and Wang, X. Vaccination, Mobility, and COVID-19 Health Outcomes: Empirical

- Comparison Before and During the Outbreak of Omicron Variant, TRB (2023), Washington DC.
16. Chen, P., Yang, X., Zhang, Y., and **Hu, S.** The Renaissance of Transit and Ridesharing: From Pandemic Towards the New Normal, TRB (2023), Washington DC.
 17. Zhao, G., Xiong, C., **Hu, S.**, Yang, M., Kabiri, A., Darzi, A., and Pan, Y. A novel measurement of job accessibility based on mobile device location data, TRB (2023), Washington DC.
 18. Sun, Q., Pan, Y., Zhou, W., Kabiri, A., Yang, M., Zhao, G., **Hu, S.**, Ashoori, M., Namadi, S., and Darzi, A. National truck travel demand estimation using GPS data, TRB (2023), Washington DC.
 19. Yang, M., Luo, W., Ashoori, M., Mahmoudi, J., Xiong, C., Lu, J., ... **Hu, S.**, & Ji, Y. (2023). Big-Data Driven Framework to Estimate Vehicle Volume Based on Mobile Device Location Data, TRB (2023), Washington DC.
 20. **Hu, S.**, Luo, W., Darzi, A., Pan, Y., Zhao, G., Liu, Y., and Xiong, C. Do Racial and Ethnic Disparities in Maintaining Social distancing Influence COVID-19 Health Outcomes? A Mediation Analysis Approach, TRB (2022), Washington DC.
 21. **Hu, S.**, Xiong, C., Younes, H., Yang, M., Darzi, A., and Jin, Z. Examining spatiotemporal evolution of racial/ethnic disparities in human mobility and COVID-19 health outcomes: Evidence from the contiguous United States, TRB (2022), Washington DC.
 22. Xiong, C., **Hu, S.**, Yang, M., Younes, H., Luo, W., Ghader, S., and Zhang, L. Mobile device location data reveal human mobility response to state-level stay-at-home orders during the COVID-19 pandemic in the USA, TRB (2021), Washington DC.
 23. **Hu, S.**, Xiong, C., Yang, M., Younes, H., Luo, W., and Zhang, L. A big-data driven approach to analyzing and modeling human mobility trend under non-pharmaceutical interventions during COVID-19 pandemic, TRB (2021), Washington DC.
 24. Jing, Y., **Hu, S.**, and Lin, H. Estimating Traffic Volume with Limited Observations: A Combination of Sampling Expansion and Geographically Weighted Poisson Regression, TRB (2021), Washington DC.
 25. Jing, Y., **Hu, S.**, and Lin, H. Joint Analysis of Scooter Sharing and Bikesharing Usage: A Structural Equation Modeling Approach, TRB (2021), Washington DC.
 26. **Hu, S.**, Chen, P., and Chen, X. Do Personalized Economic Incentives Work in Promoting Shared Mobility? Examining Customer Churn Using a Time-Varying Cox Model, TRB (2020), Washington DC.
 27. **Hu, S.**, Chen, P., Xin, F., and Xie, C. Exploring the effect of battery capacity on electric vehicle sharing programs using a simulation approach, TRB (2020), Washington DC.
 28. Chen, P., **Hu, S.**, Shen, Q., Lin, H., and Xie, C. Estimating traffic volume for local streets with imbalanced data, TRB (2019), Washington DC.
 29. **Hu, S.**, Lin, H., Xie, K., Chen, X., and Hongjie Shi. Modeling users' vehicles selection behavior in urban carsharing program, 21st IEEE International Conference on Intelligent Transportation Systems (2018).
 30. **Hu, S.**, Lin, H., Xie, K., Dai, J., and Qui, J. Impacts of rain and waterlogging on traffic speed and volume on urban roads, 21st IEEE International Conference on Intelligent Transportation Systems (2018).
 31. **Hu, S.**, Dai, J., Qiu, J., & Lin, H. Identification of Urban Road Waterlogging Using Floating Car Data. In 18th COTA International Conference of Transportation Professionals (pp. 1885-1894). Reston, VA: American Society of Civil Engineers (2018).

INVITED TALKS

1. Invited **Job Talk** at *Department of Civil, Environmental and Geomatic Engineering*, **UCL**, UK, May. 2025.
2. Invited **Job Talk** at *Andlinger Center for Energy and the Environment*, **Princeton University**, USA, Feb. 2025.
3. Invited talk at *Department of Civil & Environmental Engineering*, **University of Alberta**, Canada, Jan. 2025.
4. Invited talk at *School of Economic, Political and Policy Sciences*, **University of Texas at Dallas**, USA, Dec. 2024.
5. Invited talk at **University of Illinois Urbana-Champaign Institute-Zhejiang University**, China, Nov. 2024.
6. Invited talk at *Department of Civil and Environmental Engineering*, **University of Houston**, USA, Apr. 2024.
7. Invited talk at *School of Geography*, **University of Leeds**, UK, Mar. 2024.
8. Invited talk at *Department of Civil & Environmental Engineering*, **University of Utah**, USA, Feb. 2024.
9. Invited talk at *College of Transportation Engineering*, **Tongji University**, China, Feb. 2024.
10. Invited talk at *Civil & Environmental Engineering Department*, **New Jersey Institute of Technology**, USA, Feb. 2024.
11. Invited talk at *Department of Civil & Environmental Engineering*, **University of Pittsburgh**, USA, Feb. 2024.
12. Invited talk at *School of Computer Science and Engineering*, **Beihang University**, China, Dec. 2023.

STUDENT MENTORING

City University of Hong Kong, Hong Kong

Ph.D. Students

- Junxiang Zhang, 2026: B.S. in Computer Science, Southern University of Science and Technology
- Huazu Zhang, 2026: M.S. in Geographic Information Science, Wuhan University
- Jintong Zhang, 2026: M.S. in Electronic and Information Engineering, Beihang University

Massachusetts Institute of Technology, Cambridge, MA, USA

MIT Undergraduate Research Opportunities Program

- Jity F. Woldemichael, Undergraduate, EECS, 2023
- Victor G. Dominguez, Undergraduate, Urban Planning, 2023
- Tiffany Wang, Undergraduate, AI and Math, 2024
- Shahriar Ahmad Fahim, Undergraduate, Transportation, 2024
- Jose D. Lomelin, Undergraduate, AI and Decision Making, 2024
- Luke Anger, Undergraduate, Computer Science, 2024
- Salma Bouzit, Undergraduate, AI and Decision Making, 2025
- Jack Tucker, Undergraduate, Computer Science, 2025

Project Supervision

- Giacomo Orsi, MSc, Computer Science, EPFL, 2024
- Jonas Jostmann, Ph.D. student, Transportation, KTH Royal Institute of Technology, 2023-2024
- Javad Eshtiyagh, Ph.D. student, Transportation, Imperial College London, 2024

TEACHING EXPERIENCE

City University of Hong Kong, HK

CA2123: *Engineering Methods*, Fall 2025 (**Class size: 77**)

- Instructor; Course Leader; Examiner.
- Teach: Integrals, Ordinary Differential Equations, Curve Fitting

CA5236: *Transportation and Land Planning*, Fall 2025 (**Class size: 213**)

- Instructor; Course Leader; Examiner.
- Teach: Travel Demand Modeling, Transportation Network Modeling, TOD, Land Use Planning.

CA2066: *Professionals and Society*, Spring 2026 (**Class size: 124**)

- Instructor; Examiner.
- Teach: Social, Ethical, and Professional Responsibilities in Civil Engineering.

CA2348: *Sustainable Environment*, Spring 2026 (**Class size: 31**)

- Instructor; Examiner.
- Teach: Sustainable Urban Systems; Sustainable and Smart Mobility; Building Performance.

University of South Florida, Tampa, FL, USA

URP 6201: *Quantitative Analysis in Urban and Regional Planning*, Spring 2025

- Guest Lecturer: Big Data and AI Methods in Urban and Regional Planning.

Massachusetts Institute of Technology, Cambridge, MA, USA

MIT Kaufman Teaching Certificate Program, Spring 2024

- Course Design, Planning for Learning, Teaching for Belonging, Microteaching, Syllabus Construction, Engaging Students and Facilitating Learning

University of Maryland, College Park, MD, USA

Introduction to Transportation Engineering and Planning, Fall 2022

- Discussion leading, lecture assistance, and course materials preparation.

Tongji University, Shanghai, China

Sustainable Transportation, Fall 2018

- Course materials preparation, homework grading, programming tutorials, and final exam preparation. *Travel Behavior Analysis and Discrete Choice Models, Spring 2019*
- Course materials preparation, homework grading, programming tutorials, and final exam preparation.

AWARDS AND HONORS

- Chinese Overseas Transportation Association (COTA) Best Dissertation Award, 2023
- University of Maryland, College Park: CEE Best Doctoral Research Award, 2023
- Outstanding Reviewer, Transportation Research Part D: Transport and Environment, 2023
- Top 10 Most Cited Articles, Journal of Transport Geography, 2021~2024.
- Top 10 Most Cited Articles, Transportation Research Part D: Transport and Environment, 2021~2024.
- Top 10 Most Cited Articles, Transportation Research Part C: Emerging Technologies, 2021~2024.
- University of Maryland, College Park: Outstanding Graduate Assistant (top 2%), 2021
- University of Maryland, College Park: CEE Summer Research Fellowship, 2020
- University of Maryland, College Park: The Graduate School's Dean's Fellowship, 2019
- Tongji University: Graduate Merit Scholarship, 2018
- China Big Data Innovation Competition, Second Prize (2/140), 2017.
- Huazhong University of Science & Technology: Outstanding Graduates, 2016
- Huazhong University of Science & Technology: Undergraduate Merit Scholarship (20/7000), 2015
- National Scholarship (1/64), China, 2013~2015

SERVICE TO PROFESSION

Journal Article Reviewer

- **Transportation:** Accident Analysis and Prevention; Computer-Aided Civil and Infrastructure Engineering; Case Studies on Transport Policy; Frontiers in Future Transportation; IEEE Transactions on Intelligent Transportation Systems; Intelligent Transportation Infrastructure; International Journal of Transportation Science and Technology; Journal of Transport Geography; Journal of Public Transportation; Journal of Transport and Land Use; Journal of Advanced Transportation; Multimodal Transportation; Research in Transportation Economics; Transportation; *Transportation Research Part A/B/C/D/E*; Transport Policy; Traffic Injury Prevention; Travel Behavior and Society; Transportation Letters; Transportation Research Record; Transportation Research Interdisciplinary Perspectives; Urban Rail Transit.
- **Planning and GIS:** Cambridge Journal of Regions, Economy and Society; Cities; Computational Urban Science; Geo-spatial Information Science; *International Journal of Geographical Information Science*; International Journal of Disaster Risk Science; Journal of Planning Education and Research; Journal of Urban Technology; Regional Studies; Sustainable Cities and Society.
- **Public Health:** AIMS Public Health; AIMS Biophysics; Biosafety and Health; Health Data Science; Infectious Disease Modelling; Public Health Reviews; The Lancet Regional Health - Western Pacific.
- **Multidisciplinary:** Applied Soft Computing; Frontiers in Public Health; Information Fusion; International Journal of Data Science and Analytics; IEEE Access; PLOS One; *Nature Cities*; *Nature Communications*; Scientific Reports; Telematics and Informatics; Technological Forecasting and Social Change.

Conference Proceeding Reviewer

- TRB Transportation Research Board Annual Meeting
- WWW International World Wide Web Conference
- COTA International Conference of Transportation Professionals
- IACP International Association of China Planning
- IEEE Intelligent Transportation Systems Society Conference Management System

Journal Editor (*Young Editor*)

- Intelligent Transportation Infrastructure
- Urban Rail Transit (Chinese)

Committee Member

- World Transportation Convention (WTC) JT0504, Integrated Mobility Service
- WTC GH0203, Traffic Behaviour Modeling and Transport Policy Analysis
- WTC GH0103, Multimodal Urban Transportation Systems Analysis
- WTC GH0404, Passenger Intermodal Transportation
- Global Data Facility-Mobile Phone Data (GDF-MPD) Program, World Bank Group