

Sina Bahrami

Assistant Research Scientist
Civil & Environmental Engineering
University of Michigan, Ann Arbor

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EDUCATION

University of Toronto <i>Ph.D. in Civil Engineering</i>	Toronto, Canada 2015 - 2019
Sharif University of Technology <i>M.Sc. in Civil Engineering</i>	Tehran, Iran 2013 - 2015
Sharif University of Technology <i>B.Sc. in Civil Engineering</i>	Tehran, Iran 2007 - 2012

WORK EXPERIENCE

Assistant Research Scientist <i>University of Michigan</i>	Ann Arbor, USA Feb. 2023 - Present
Assistant Professor <i>Eindhoven University of Technology</i>	Eindhoven, Netherlands Sep. 2021 - Jan. 2023
Postdoctoral Fellow <i>University of Michigan</i>	Ann Arbor, USA Jan. 2020 - Aug. 2021
Postdoctoral Fellow <i>University of Toronto</i>	Toronto, Canada Sep. 2019 - Dec. 2019

PUBLICATIONS

Peer-reviewed Journal Articles (*corresponding author)

- J17. Ahmadian, M., **Bahrami, S.**, Nourinejad, M., and Yin, Y. (2025) Investment and Financing of Roadway Digital Infrastructure for Automated Driving, *Transportation Research Part B: Methodological*, 192, 103146.
- J16. Vignon, D.*, and **Bahrami, S.** (2025) Safety, Liability, and Insurance Markets in the Age of Automated Driving, *Transportation Research Part B: Methodological*, 191, 103115.
- J15. **Bahrami, S.**, Nourinejad, M.*, Yin, Y., and Wang, H. (2023) The three-sided market of on-demand delivery. *Transportation Research Part E: Logistics and Transportation Review*, 179, 103313.
- J14. Nourinejad, M., **Bahrami, S.***, and Yin, Y. (2023) Optimal Investment in Driving Automation: Individual vs. Cooperative Sensing. *Transportation Research Part B: Methodological*, 174, 102777.
- J13. Radvand, T., **Bahrami, S.**, Yin, Y.*, and Laberteaux, K. (2022) Curbing Cruising as Substitution for Parking in Automated Mobility. *Transportation Research Part C: Emerging Technologies*, 143, 103853.
- J12. Vignon, D., Yin, Y.*, **Bahrami, S.**, and Laberteaux, K. (2022). Economic analysis of vehicle-infrastructure cooperative approach to automated driving. *Transportation Research Part C: Emerging Technologies*, 142, 103757.
- J11. Niroumand, R., **Bahrami, S.**, Aashtiani, H. Z., and Hajbabaie, A.* (2022). Battery electric vehicles network equilibrium with flow-dependent energy consumption. *Transportation Research Record: Journal of the Transportation Research Board*, 2677(5), 444–462.
- J10. **Bahrami, S.**, Nourinejad, M.*, Nesheli, M. M., and Yin, Y. (2022). Optimal composition of solo and pool services for on-demand ride-hailing. *Transportation Research Part E: Logistics and Transportation Review*, 161, 102680.
- J9. **Bahrami, S.***, and Roorda, M. J. (2022). Autonomous vehicle parking policies: A case study of the City of Toronto. *Transportation Research Part A: Policy and Practice.*, 155, 283-296.

- J8. **Bahrami, S.**, Vignon, D., Yin, Y.*, and Laberteaux, K. (2021). Parking management of automated vehicles in downtown areas. *Transportation Research Part C: Emerging Technologies*, 126, 103001.
- J7. **Bahrami, S.***, Nourinejad, M., Amirjamshidi, G., and Roorda, M. J. (2020). The hybrid electric vehicle routing problem: A power management model. *Transportation Research Part C: Emerging Technologies*, 111, 318-333.
- J6. **Bahrami, S.***, and Roorda, M. J. (2020). Optimal traffic management policies for mixed human and automated traffic flows. *Transportation Research Part A: Policy and Practice*, 135, 130-143.
- J5. **Bahrami, S.***, and Roorda, M. J. (2020). Autonomous vehicles relocation problem in a parking facility. *Transportmetrica A: Transport Science*, 16(3), 1604-1627.
- J4. Nourinejad, M., **Bahrami, S.***, and Roorda, M. J. (2018). Design of parking facilities for autonomous vehicles. *Transportation Research Part B: Methodological*, 109, 110-127.
- J3. **Bahrami, S.***, Aashtiani, H. Z., Nourinejad, M., and Roorda, M. J. (2017). A complementarity equilibrium model for electric vehicles with charging. *International Journal of Transportation Science and Technology*, 6(4), 255-271.
- J2. Jahangiriesmaili, M., **Bahrami, S.***, and Roorda, M. J. (2017). Solution of two-echelon facility location problems by approximation methods. *Transportation Research Record: Journal of the Transportation Research Board*, 2610, 1-9.
- J1. Nourinejad, M*, Zhu, S., **Bahrami, S.**, and Roorda, M. J. (2015). Vehicle relocation and staff rebalancing in one-way carsharing systems. *Transportation Research Part E: Logistics and Transportation Review*, Vol. 81, No. 1, pp 98-113.

Book Chapters

- B1. Meredith-Karam, P., Jiang, J., **Bahrami, S.**, and Roorda, M. (2024). Express Package Delivery Optimization Using Walkers, Cargo Tricycles and Delivery Trucks. *Combinatorial Optimization and Applications*. Springer, 407-429.

INVITED TALKS AND SEMINARS

- T9. Three-sided Market of On-demand Food Delivery. University of Nebraska, Lincoln, NE.
- T8. Three-sided Market of On-demand Food Delivery. University of Michigan, Ann arbor, MI.
- T7. Parking management of automated vehicles in downtown areas. Traffic flow webinars organized by the TRB committee on Traffic Flow Theory and characteristics (ACP50).
- T6. Impacts of Automated Vehicles on Parking. University of Arizona, Tucson, AZ.
- T5. Impacts of Automated Vehicles on Parking. University of Houston, Houston, TX.
- T4. Impacts of Autonomous Vehicles on Parking and Congestion. University of Michigan, Ann arbor, MI.
- T3. Impacts of Autonomous Vehicles on Parking and Congestion. McMaster University, Hamilton, ON.
- T2. Autonomous Vehicle Parking Policies: A Case Study of the City of Toronto. iCity-CATTS Symposium, Toronto, ON.
- T1. Design of parking facilities for autonomous vehicles. 2018 TAC-ITS Canada Joint Conference & Exhibition, Niagara Falls, ON.

TECHNICAL CONFERENCE PRESENTATIONS

- P23. Andreoli, D., Borgers, A., van der Waerden, P., **Bahrami, S.** Driver Compliance with In-Vehicle Smart Parking Advice: A Sequential Stated Choice Experiment. 104th Annual Meetings of Transportation Research Board (TRB), Washington, D.C.
- P22. Ahmadian, M., **Bahrami, S.**, Nourinejad, M., and Yin, Y. Investing in Stationary and Mobile Sensors in Automated Traffic. 104th Annual Meetings of Transportation Research Board (TRB), Washington, D.C.
- P21. Ashrafi, Z., Nourinejad, M., **Bahrami, S.** Impacts of On-board Automated Vehicle Sensors on Traffic Flow: Analysis of Sensor Range, Rate, and Resolution. 2024 INFORMS Annual Meeting, Seattle, WA.
- P20. Vignon, D., and **Bahrami, S.** Safety, Liability, and Insurance Markets in the Age of Automated Driving. 2024 INFORMS Annual Meeting, Seattle, WA.
- P19. **Bahrami, S.**, Nourinejad, M., and Yin, Y. Financing Smart Roads for Driving Automation. 103rd Annual Meetings of Transportation Research Board (TRB), Washington, D.C.
- P18. Vignon, D., and **Bahrami, S.** Safety, Liability, and Insurance Markets in the Age of Automated Driving. 103rd Annual Meetings of Transportation Research Board (TRB), Washington, D.C.
- P17. Ahmadian, M., **Bahrami, S.**, Nourinejad, M., and Yin, Y. Optimal Investment in Driving Automation: Onboard vs. Roadside Sensors. 2023 INFORMS Annual Meeting, Phoenix, AZ.
- P16. Dhaness, J., **Bahrami, S.**, Nourinejad, M., and Yin, Y. Perfect is the Enemy of the Good in Autonomous Vehicle Deployment. 2023 INFORMS Annual Meeting, Phoenix, AZ.
- P15. Heydarigharai, E., Ahmadian, M., **Bahrami, S.**, and Nourinejad, M. Traffic Assignment Under Crowd-Sensed Congestion Information. 2023 INFORMS Annual Meeting, Phoenix, AZ.
- P14. Nourinejad, M., **Bahrami, S.**, and Yin, Y. Optimal Investment in Driving Automation: Individual Versus Cooperative Sensing. 102nd Annual Meetings of Transportation Research Board (TRB), Washington, D.C.
- P13. **Bahrami, S.**, Nourinejad, M., Yin, Y., and Wang, H., The Three-Sided Market of On-Demand Food Delivery. 102nd Annual Meetings of Transportation Research Board (TRB), Washington, D.C.
- P12. **Bahrami, S.** Bundle design for mobility as a service. 10th symposium of the European Association for Research in Transportation (hEART) in Leuven, Belgium.
- P11. **Bahrami, S.**, Vignon, D., Yin, Y., and Laberteaux, K. Parking Management of Automated Vehicles in Downtown Areas. 100th Annual Meetings of Transportation Research Board (TRB), Washington, D.C.
- P10. Vignon, D., **Bahrami, S.**, Yin, Y., and Laberteaux, K. Infrastructure Investment in the Age of Automated Vehicles. 100th Annual Meetings of Transportation Research Board (TRB), Washington, D.C.
- P9. **Bahrami, S.**, and Roorda, M. J. Autonomous vehicle parking policies: A case study of the City of Toronto. 99th Annual Meetings of Transportation Research Board (TRB), Washington, D.C.
- P8. Meredith-Karam, P., Jiang, J., **Bahrami, S.**, and Roorda, M. J., Express Package Delivery Optimization Using On-Foot Personnel, Cargo Tricycles and Delivery Trucks. 99th Annual Meetings of Transportation Research Board (TRB), Washington, D.C.
- P7. **Bahrami, S.**, and Roorda, M. J., Optimal Operations of an Automated Vehicle Parking Lot. Canadian Transportation Research Forum 54th Annual Conference, Vancouver, BC.
- P6. **Bahrami, S.**, and Roorda, M. J., Optimal Traffic Management Policies for Mixed Human and Automated Traffic Flows. 98th Annual Meetings of Transportation Research Board (TRB), Washington, D.C.
- P5. **Bahrami, S.**, Mousavi, K., Shafiee Fard, M., and Roorda, M. J., Optimizing Delivery Location for Online Shopping. 7th METRANS International Urban Freight Conference, Long Beach, CA.

- P4. **Bahrami, S.**, Shafiee Fard, M., and Roorda, M. J., Optimal Deployment of Fast Charging Stations. Canadian Transportation Research Forum 52nd Annual Conference, Winnipeg, MB.
- P3. Niroumand, R., **Bahrami, S.**, Aashtiani, H. Z., and Roorda, M. J., Battery Electric Vehicles Network Equilibrium with Flow-Dependent Energy Consumption. 97th Annual Meetings of Transportation Research Board (TRB), Washington, D.C.
- P2. Jahangiriesmaili, M., **Bahrami, S.**, and Roorda, M. J., Two-Echelon Facility Location Problems Using Approximation Methods. 96th Annual Meetings of Transportation Research Board (TRB), Washington, D.C.
- P1. **Bahrami, S.**, Nourinejad, M., Amirjamshidi, G., Roorda, M. J., A plugin hybrid electric vehicle routing problem with recharging. 95th Annual Meeting of the Transportation Research Board (TRB), Washington, D.C.

EXTERNAL GRANTS

Role	Title & Agency	Duration & Amount
Co-PI	Effectiveness of Inductive Vehicle Charging to Alleviate EV Range Anxiety Michigan Department of Transportation	2024-2026 \$220,000
Project Manager	Potential Impacts of Automated Vehicles on Transportation and Land Use Toyota Motor Engineering and Manufacturing North America	2020-2021
Project Manager	Applications of Drones for Last Mile Logistics Transport Canada	2019-2020
Project Manager	Design and Analysis of City Logistics Systems in Toronto Purolator Express Delivery	2017-2019

TEACHING EXPERIENCE

Lecturer <i>Courses: Mobility and Logistics, Smart Cities, and Big Data for Urban Analysis</i>	Eindhoven University of Technology
Co-Lecturer <i>Course: Transportation Network Modeling</i>	University of Michigan
Guest Lecturer <i>Courses: Freight Transportation, and Transport I</i>	University of Toronto
Teaching Assistant <i>Courses: Transport II, Calculus I, Calculus II, Probability Theory, Engineering Economics</i>	University of Toronto

MEDIA COVERAGE

- **Forbes**: How autonomous vehicles might reshape our cities.
- **University of Toronto Engineering News**: How self-driving cars could shrink parking lots.
- **Global News**: Parking lot karma: How driverless cars could change the urban landscape.
- **TechXplore**: How self-driving cars could shrink parking lots.
- **Science Daily**: How self-driving cars could shrink parking lots.
- **New Atlas**: Parking lots: Why autonomous cars could save acres of space.
- **IEEE Spectrum**: How Self-Driving Cars Might Transform City Parking.
- **REMI Network**: Self-driving cars may condense parking lots: study.

SERVICE TO PROFESSION

Committee Member

TRB Freight Transportation Planning and Logistics (AT015)	2016-Present
TRB Regional Transportation Systems Management and Operations (AHB10)	2016-2019

Organizing Committee

- 2021 International Symposium on Transportation Data and Modelling
- 25th International Symposium on Transportation and Traffic Theory (ISTTT25)

Editorial Board

- Sub-editor of freight routing, supply chain and logistics optimization, TRB - AT015
- Guest Editor for the Special Issue Advanced Measurement, Monitoring, and Sensing Technologies for Smart Urban Mobility for Measurement
- Sub-editor of vehicle-highway automation, TRB - ACP30

Session chair

- TRB 103rd Annual Meeting session on Advances in Last-Mile Package Delivery and Logistics
- 2023 INFORMS Annual Meeting session on Optimization of Autonomous Transportation Systems
- 2021 INFORMS Annual Meeting session on Pricing in shared mobility markets
- TRB 102nd Annual Meeting session on Freight planning and health care logistics during COVID-19 pandemic
- 2021 International Symposium on Transportation Data and Modelling session on Behavior
- TRB 100th Annual Meeting session on Freight Operations and Logistics

Peer Review Service (Num. of reviews)

- Transportation Science (6)
- Transportation Research Part A: Policy and Practice (17)
- Transportation Research Part B: Methodological (22)
- Transportation Research Part C: Emerging Technologies (30)
- Transportation Research Part D: Transport and Environment (8)
- Transportation Research Part E: Logistics and Transportation Review (25)
- Transportation Research Record (19)
- IEEE Transactions on Intelligent Transportation Systems (17)
- Transportation Letters (9)
- Journal of Advanced Transportation (6)

SERVICE TO INSTITUTION

University of Michigan

- Strategic Implementation Committee at Department of Civil & Environmental Engineering
- IT and Communications Committee at Department of Civil & Environmental Engineering

Eindhoven University of Technology

- Examination committee at Department of Built Environment
- Assessment committee at Department of Built Environment
- MT Research assessor at Department of Built Environment

MENTORED AND SUPERVISED STUDENTS

Ph.D. Students

- Tara Radvand (University of Michigan)

Master Students

- Senna Baijens (Eindhoven University of Technology)
- Hamzeh Moghaddam (Eindhoven University of Technology)
- Dennis Andreoli (Eindhoven University of Technology)

Undergrad Students

- Patrick Meredith Karam (University of Toronto)
- Jeffrey Jiang (University of Toronto)

High school Students

- Angela Chen

HONORS AND AWARDS

- Runner-up to best paper award, ITS Canada, 2019.
- Runner-up to best conference paper award, 54th Canadian Transportation Research Forum, 2019.
- Richard Soberman graduate student fellowship, University of Toronto, 2017.