




# Sina Bahrami

Assistant Research Scientist  
Civil & Environmental Engineering  
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## Education

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

## Work Experience

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

## Publications

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### Peer-reviewed Journal Articles (\*corresponding author)

- 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 On-Foot Personnel, Cargo Tricycles and Delivery Trucks. *Combinatorial Optimization*.

#### Peer-reviewed Conference Proceedings

- C3. **Bahrami, S.** (2022). Bundle Design for Mobility as a Service. In *hEART 2022: 10th Symposium of the European Association for Research in Transportation*.
- C2. **Bahrami, S.**, Mousavi, K., Shafiei Fard, M., and Roorda, M. (2018). Optimizing Delivery Location for Online Shopping. In *Transportation Research Board 97th Annual Meeting*.
- C1. **Bahrami, S.**, Shafiei Fard, M., and Roorda, M. (2017). Optimal Deployment of Fast Charging Stations. In *52nd Annual Conference Canadian Transportation Research Forum*.

#### Under Review Articles:

- S1. Vignon, D., and **Bahrami, S.** Safety, Liability, and Insurance Markets in the Age of Automated Driving, *Submitted to Transportation Research Part B: Methodological*.

#### Invited Talks and Seminars

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- T9. The Three-sided Market of On-demand Food Delivery. University of Nebraska, Lincoln, NE.
- T8. The 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

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- P19. **Bahrami, S.**, Nourinejad, M., and Yin, Y. Financing Smart Roads for Driving Automation. 103<sup>rd</sup> 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. 103<sup>rd</sup> 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. Heydarigharaei, 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. 102<sup>nd</sup> 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. 102<sup>nd</sup> Annual Meetings of Transportation Research Board (TRB), Washington, D.C.
- P12. **Bahrami, S.** Bundle design for mobility as a service. 10<sup>th</sup> 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. 100<sup>th</sup> 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. 100<sup>th</sup> 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. 99<sup>th</sup> 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. 99<sup>th</sup> 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 54<sup>th</sup> Annual Conference, Vancouver, BC.
- P6. **Bahrami, S.**, and Roorda, M. J., Optimal Traffic Management Policies for Mixed Human and Automated Traffic Flows. 98<sup>th</sup> 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. 7<sup>th</sup> 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 52<sup>nd</sup> 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. 97<sup>th</sup> 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. 96<sup>th</sup> 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. 95<sup>th</sup> Annual Meeting of the Transportation Research Board (TRB), Washington, D.C.

## Extramural Funding

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

## Teaching Experience

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

<b>Committee Member</b>	
TRB Freight Transportation Planning and Logistics (AT015)	2016-Present
TRB Regional Transportation Systems Management and Operations (AHB10)	2016-2019
<b>Organizing Committee</b>	
2021 International Symposium on Transportation Data and Modelling	
25 <sup>th</sup> International Symposium on Transportation and Traffic Theory (ISTTT25)	
<b>Editorial Board</b>	
Sub-editor of freight routing, supply chain and logistics optimization, TRB - AT015	
<b>Session chair</b>	
TRB 103 <sup>rd</sup> 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 102<sup>nd</sup> 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 100<sup>th</sup> Annual Meeting session on Freight Operations and Logistics

**Peer Review Service** (Num. of reviews)

Transportation Science (2)  
Transportation Research Part A: Policy and Practice (15)  
Transportation Research Part B: Methodological (17)  
Transportation Research Part C: Emerging Technologies (25)  
Transportation Research Part D: Transport and Environment (6)  
Transportation Research Part E: Logistics and Transportation Review (19)  
Transportation Research Record (17)  
IEEE Transactions on Intelligent Transportation Systems (13)  
Transportation Letters (9)  
Journal of Advanced Transportation (6)

## Service to institution

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**University of Michigan**

IT and Communications Committee at Department of Civil & Environmental Engineering  
2023 Towner prize judging committee

**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

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**Ph.D. Students**

Yutian Liu (Eindhoven University of Technology)  
Elham Heydari-gharaei (York University)  
Tara Radvand (University of Michigan)  
Zahra Ashrafi (York University)

**Master Students**

Senna Baijens (Eindhoven University of Technology)  
Hamzeh Moghaddam (Eindhoven University of Technology)  
Dennis Andreoli (Eindhoven University of Technology)  
Mohammad amir Ahmadian (York University)  
Joshua Dhaness (York University)  
Amirsalar Alampoor (Sharif University of Technology)

**Undergrad Students**

Patrick MeredithKaram (University of Toronto)  
Jeffrey Jiang (University of Toronto)  
Motahare Shafiei Fard (Sharif University of Technology)  
Mobina Nankali (Sharif University of Technology)  
Shaghayegh Nouhi (Sharif University of Technology)

## Honors and Awards

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