

Bahar Viniche

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EDUCATION

Postdoctoral Fellow in Operations Management

Rotman School of Management, University of Toronto

Working with Prof. Sheng Liu and Prof. Nooshin Salari.

Toronto, Canada
September 2025 - Current

PhD in Transportation Engineering and Management

York University and Rotman School of Management, University of Toronto

Thesis: Parametric Design of Multi-Echelon Last-Mile Delivery Systems Using Emerging Technologies.

Nominated for the Best Thesis Award in Transportation Engineering and Management (TBA Feb 2026).

Supervisors: Prof. Mehdi Nourinejad, Prof. Opher Baron, Prof. Oded Berman.

Researcher at Interactive-OR lab: Interactive last-mile logistics platforms using data analysis, ML, and Operations Research.

Toronto, Canada

Jan 2021 – 2025

MSc in Air Transportation

Sharif University of Technology

Thesis: Airline Development Model based on Sub-Systems Dependencies. Graduated with Distinction. (Thesis Grade: Excellent)

Tehran, Iran
Sep 2016 – Dec 2018

B.S.c in Aerospace Engineering

Sharif University of Technology

Graduated with Distinction (Thesis Grade: Excellent)

Tehran, Iran
Sep 2011 – Dec 2015

PUBLICATIONS AND PRESENTATIONS

Journal Publications

Recipient-Dependent Last-Mile Delivery Routing With Autonomous Vehicle Applications.

Bahar D Viniche, Mehdi Nourinejad, Opher Baron, Oded Berman. *Major Revision at Transportation Science Journal*

Parametric Design of Time-Sensitive Routing With Recipient-Dependent Contributions.

Bahar D Viniche, Mehdi Nourinejad, Opher Baron, Oded Berman. *Published at Transportation Research: Part C Journal*

Tactical Routing and Fleet Planning in Drone-Assisted Last-Mile Delivery.

Bahar D Viniche, Mehdi Nourinejad, Opher Baron, Oded Berman. *Ready for Submission to Manufacturing & Service Operations Management Journal*

Evaluating Drone-Delivery Efficiency in Different Urban Settings Using GNNs.

Bahar D Viniche, Mehdi Nourinejad, Opher Baron. *Working Paper*

Equitable Territory Planning for Last-Mile Routing with Temporal Flexibility

Bahar D Viniche, Ahana Malhorta, Elkafi Hassini, Mehdi Nourinejad. *Working Paper*

Conference Presentations

Tactical Routing and Fleet Planning in Drone-Assisted Last-Mile Delivery

MSOM Conference, 2025, London, UK

Evaluating Drone-Delivery Efficiency in Different Urban Settings Using Graph Neural Networks (GNNs)

18th INFORMS Computing Society (ICS) Conference, 2025, Toronto, Canada

Strategic Fleet Composition and Efficiency Prediction for Drone-Enabled Last-Mile Delivery.

INFORMS Annual Meeting, 2024, Seattle, US

Tactical Fleet Planning in Drone-Enabled Deliveries and Predicting Drone Delivery Efficiency in Urban Areas using GNNs.

Purdue Operations Conference, 2024, West Lafayette, US

Autonomous Vehicle Applications in Recipient-Dependent Deliveries.

Canadian Operational Research Society (CORS), 2023, Montreal, Canada

Tactical Fleet Planning in Drone-Enabled Deliveries.

INFORMS Annual Meeting, 2023, Phoenix, US

Fleet Composition Optimization in Drone-Enabled Deliveries.

102nd Annual meeting of Transportation Research Board (TRB), 2023, Washington D.C., US

Fleet Composition Optimization in Drone-Enabled Deliveries.

Canadian Operational Research Society (CORS), 2022, Vancouver, Canada

Airline Dynamic Modeling for Uniform Development Based on Sub-Systems Dependencies.

Third Annual Workshop on System Dynamics in Transportation Modelling, 2020, Palermo, Italy

TEACHING EXPERIENCE

Teaching Assistant at York University, Lassonde School of Engineering Teaching Assistant Excellence Award in Civil Engineering Capstone Design Project, Project Management, Civil Engineering Design Project, Material and Design, Mysteries of Everyday Materials, Traffic Simulation Modelling.	2021 – 2025 Toronto, Canada
Teaching Assistant at Graduate School of Business and Management, Sharif University of Technology System Dynamics (Graduate Course).	2017 – 2018 Tehran, Iran
Teaching Assistant at Sharif University of Technology, Mechanics and Aerospace Engineering CAD, Aircraft Performance (Graduate Course), Mechanics of Materials.	2015 – 2018 Tehran, Iran
Volunteer Tutor at Yarigaran Group Providing free education to students from underserved families.	2011 – 2013 Tehran, Iran

INDUSTRY EXPERIENCE

Research and Development Engineer Sepehran Airline (FlySepehran) •Conducted research on airline cost management, focusing on optimizing maintenance department expenses. •Using Matlab for cost analysis and statistical modeling. •Contributed to a major project on airline reliability, utilizing data-driven approaches to identify cost-saving opportunities. •Analyzed airline operations through statistical modeling and optimization techniques, developing insights for sustainable growth and long-term operational improvements.	Aug 2019 – Jul 2020 Tehran, Iran
Aviation Intern Isfahan International Airport •Analyzed operational workflows to understand the logistical challenges and decision-making processes in time-sensitive transportation environments. •Gained firsthand experience in the high-speed operations of the control tower.	Jun 2014 – Aug 2014 Isfahan, Iran

HONORS AND AWARDS

Women in Transportation Graduate Student Award WTS (Women in Transportation)-Toronto Area Chapter	Toronto, Canada 2023
Graduate Representative - The Learning Curriculum and Students (LCS) Committee Lassonde School of Engineering, York University	Toronto, Canada 2023 – 2024
Graduate Representative - Equity, Diversity, and Inclusion (EDI) Subcommittee York University	Toronto, Canada 2021 – 2022
Academic Excellent Award York University Faculty of Graduate Studies	Toronto, Canada 2021 - 2025

TECHNICAL SKILLS

Programming Languages and Software: Python, Gurobi, Matlab, Wolfram Mathematica, JavaScript, HTML, CPLEX, Stata, LATEX, AnyLogic, PowerBI, Vensim, Vissim, ArcGIS.

SERVICE RECORDS

Session Chair <i>2023 INFORMS Annual Meeting</i>	Oct 2023 <i>Phoenix, US</i>
Session Chair <i>2023 Canadian Operation Research Conference (CORS)</i>	Jun 2023 <i>Montreal, Canada</i>
Mentor in the Hack ITE York University <i>Institute of Transportation Engineers - York University Student Chapter</i>	Feb 2022 <i>Toronto, Canada</i>
Moderator in CLUE Symposium <i>City Logistics and Urban Economics (CLUE)</i>	Jan 2022 <i>Toronto, Canada</i>
CLUE Research-in-Progress Monthly Cafe <i>City Logistics and Urban Economics (CLUE)</i>	Jan 2022 – Jan 2024 <i>Toronto, Canada</i>
SFC Graduate Research Assistance <i>Smart Freight Center</i>	Jan 2021 – 2025 <i>Toronto, Canada</i>
Central Council Member of Sharif University Mountaineering Group <i>Sharif University of Technology</i>	Sep 2011 – Aug 2016 <i>Tehran, Iran</i>

EXTRACURRICULAR INTERESTS

Reading: Avid reader. INFORMS book club and WORMS book club member.

Climing and Hiking: Certified mountaineer and rock climber (top-rope).

Music: Playing Piano and Harmonica.