ALIREZA KHANI, PHD, PE

Associate Professor (with tenure)
Department of Civil, Environmental & Geo- Engineering
University of Minnesota Twin Cities

Phone: (612) 624-4411
Cell: (520) 665-9597
Email: akhani@umn.edu

IDENTIFYING INFORMATION

Academic Rank

Associate Professor	Civil, Environmental, and Geo- Engineering (CEGE)
Affiliated Faculty	Industrial and Systems Engineering (ISyE)
Affiliated Faculty	Master of Geographic Information Science (MGIS)

Education

Degree	Institution	Date Degree Granted
B.S., Civil Engineering	Sharif University of Technology	2006
M.S., Civil Engineering (Transportation)	Sharif University of Technology	2008
Ph.D., Civil Engineering (Transportation)	University of Arizona	2013

* Minor: Systems & Industrial Engineering

Employment

09/2021 - Present, Associate Professor
Department of Civil, Environmental and Geo- Engineering, University of Minnesota, Twin Cities, MN

09/2015 - 08/2021, Assistant Professor
Department of Civil, Environmental and Geo- Engineering, University of Minnesota, Twin Cities, MN

09/2014 - 08/2015, Research Associate
Network Modeling Center, University of Texas, Austin, TX

09/2013 - 08/2014, Postdoctoral Fellow
Network Modeling Center, University of Texas, Austin, TX

01/2010 - 08/2013, Graduate Research Assistant
Department of Civil Engineering and Engineering Mechanics, University of Arizona, Tucson, AZ

04/2013 - 08/2013, Transportation Modeling Intern
Maricopa Association of Governments, Phoenix, AZ

05/2012 - 08/2012, Transportation Modeling Intern
San Francisco County Transportation Authority, San Francisco, CA

05/2008 - 01/2010, Transportation Engineer
Transportation and Logistics Department, Tarh-e Now-Andishan Consultants, Tehran, Iran

01/2009 - 06/2009, Adjunct Lecturer
Civil Engineering Department, Azad University of Parand, Tehran, Iran

06/2007 - 05/2008, Transportation Planner
Andishkar Consultants, Tehran, Iran

05/2005 - 08/2005, Transportation Engineering Intern
Transportation and Logistics Department, Tarh-e Now-Andishan Consultants, Tehran, Iran

RESEARCH

Research Grants (∼$4.0M)

Investigator Status: PI
Title: Analyzing Truck Size and Weight Impacts on Vehicle Miles Traveled
Sponsor: Minnesota Department of Transportation
Dates: 7/2024-6/2026

Investigator Status: PI
Title: Transitioning to EV Fleets: Best Practices and A Decision Tool
Sponsor: Minnesota Department of Transportation
Dates: 5/2024-12/2025

Investigator Status: Co-I
PI: Ying Song, Department of Geography, University of Minnesota
Title: Value of Dedicated Right-of-Way: Impact of Transit Service Reliability on Ridership and Employment along Transit Corridors
Sponsor: Minnesota Department of Transportation
Dates: 7/2023-2/2025

Investigator Status: PI
Title: Western Minnesota Contactless Payment Project
Sponsor: Federal Transit Administration through Minnesota Department of Transportation
Dates: 11/2022-6/2024

Investigator Status: PI
Title: MNDOT's Mobility-as-a-Service Platform: Assessing User Behavior and Measuring System's Benefits
Sponsor: Federal Transit Administration through Minnesota Department of Transportation
Dates: 9/2022-6/2024

Investigator Status: PI
Title: Designing an autonomous service to cover transit last mile in low-density areas
Sponsor: Minnesota Department of Transportation
Dates: 7/2021-3/2024

Investigator Status: PI
Title: Transitway Impacts Research Program Project: Transfer Behavior and Off-Peak Commutes
Sponsor: Hennepin County and Metropolitan Council
Dates: 7/2021-3/2024

Investigator Status: Co-I
PI: Tom Fisher, College of Design, University of Minnesota
Title: Community Transit Strategies
Sponsor: Minnesota Department of Transportation
Dates: 7/2021-12/2022

Investigator Status: PI
Title: Benefits and Barriers to Electrification of the Freight System in Minnesota
Sponsor: Minnesota Freight Advisory Council
Dates: 6/2021-8/2022

Investigator Status: PI
Title: Identifying and Optimizing Electric Vehicle Corridor Charging Infrastructure for Medium and Heavy Duty Trucks
Sponsor: Minnesota Department of Transportation and Freight Mobility Research Institute (FMRI), USDOT's Tier 1 University Transportation Center
Dates: 11/2020-6/2023

Investigator Status: Co-I
PI: Anu Ramaswami, Princeton University
Title: Low-Carbon Mobility, Energy and Waste-Circular Economy [MobiEnCE] Transitions in the Metropolitan Council Region: Partnerships to Maximize Community Benefits
Sponsor: Metropolitan Council
Dates: 12/2019-6/2021

Investigator Status: PI
Title: Managing the Growth of Last-mile Deliveries and Curb Space Demand
Sponsor: Freight Mobility Research Institute (FMRI), USDOT's Tier 1 University Transportation Center
Dates: 9/2019-9/2020

Investigator Status: PI
Title: Impact of Transitways on Travel on Parallel and Adjacent Roads and Park-and-ride Facilities
Sponsor: Minnesota Department of Transportation
Dates: 7/2019-1/2021

Investigator Status: Co-I
PI: Mihai Marasteanu, CEGE, University of Minnesota
Title: Remaining Service Life Asset Measure, Phase 2
Sponsor: Minnesota Department of Transportation

Dates: 7/2019-6/2021

Investigator Status: PI
Title: Optimization of Winter Maintenance Stations for Safe and Efficient Freight Transportation
Sponsor: Freight Mobility Research Institute (FMRI), USDOT's Tier 1 University Transportation Center
Dates: 11/2018-11/2019

Investigator Status: Co-I
PI: Zhi-Li Zhaing, CS&E, University of Minnesota
Title: SCC: Leveraging Autonomous Shared Vehicles for Greater Community Health, Equity, Livability, and Prosperity (HELP)
Sponsor: National Science Foundation
Dates: 9/2018-8/2021

Investigator Status: Co-I
PI: Frank Douma, HHH, University of Minnesota
Title: Analysis of 1-405 Traffic Data and Performance Measures and Recommendations to Improve Corridor Performance
Sponsor: Joint Transportation Committee, State of Washington
Dates: 6/2017-3/2018

Investigator Status: PI
Title: After Study of the Bus Rapid Transit 'A Line' Impacts
Sponsor: Minnesota Department of Transportation
Dates: 4/2017-12/2018

Investigator Status: Co-I
PI: Saif Benjaafar, ISyE, University of Minnesota
Title: Public/Private Partnerships in Transit: Case Studies and Analysis
Sponsor: Minnesota Council on Transportation Access
Dates: 3/2017-8/2017

Investigator Status: Co-I
PI: Yingling Fan, HHH, University of Minnesota
Title: Multimodal Connections with Transitways: Ridership, Access Mode and Route Choice Implications
Sponsor: Transitway Impact Research Program
Dates: 8/2017-8/2018

Investigator Status: PI
Title: EAGER: Collaborative Proposal: Towards Dynamic Social Ride-sharing: An Essential Component in Envisioned Smart Communities
Sponsor: National Science Foundation

Dates: 8/2016-8/2019

Investigator Status: PI
Title: U-Pass Ridership Trends
Sponsor: Metro Transit
Dates: 11/2016-11/2017

Investigator Status: Co-I
PI: Elizabeth Sall, Metropolitan Transportation Commission
Title: SHRP2 C10 Implementation Assistance (Development of a schedule-based transit assignment model)
Sponsor: Federal Highway Administration
Dates: 8/2015-8/2016

Investigator Status: PI
Title: Mitigating Public Health Risk through the Optimization of Transit Service in Response to COVID-19 Outbreak
Sponsor: Office of Vice-President for Research, University of Minnesota
Dates: 5/2020-4/2021

Investigator Status: PI
Title: Incremental Transition to Electric Transit Systems: Evaluation, Planning, and Operations
Sponsor: Center for Transportation Studies, University of Minnesota
Dates: 7/2020-6/2021

Investigator Status: PI
Title: Evaluation of Multimodal Transportation Networks through Shared Mobility Systems
Sponsor: Center for Transportation Studies, University of Minnesota
Dates: 3/2018-6/2019

Investigator Status: Co-I
PI: Saif Benjaafar, ISyE, University of Minnesota
Title: Collaborative Consumption in Peer-to-Peer Car Sharing: Models, Analysis, and Experiments
Sponsor: Center for Transportation Studies, University of Minnesota
Dates: 2/2016-6/2017

Investigator Status: PI
Title: Modeling Reliability of Multimodal Transportation Networks
Sponsor: Center for Transportation Studies, University of Minnesota
Dates: 2/2016-6/2017

Software and Codes

Flexible Assignment and Simulation Tools for Transit and Intermodal Passengers (FAST-TrIPs), an open source C++ tool for transit operational planning, GitHub link, A three-agency application link

Schedule-based Transit Shortest Path (SBTSP), an open source Python program for research and education on transit network modeling, GitHub link

Mean-Standard Deviation Shortest Path (MSTD-SP), an open source Python program for research and education on transportation network reliability, GitHub link

Publications

Underline indicates student in Khani's research group
Asterisk (*) indicates the corresponding author

Refereed Journal Articles

43. DeBruin, H. & **A. Khani***, (2024), GIS-Based Comprehensive Shared Micromobility Station Siting Optimization for Small Urban Areas. *Transportation Research Record*, Accepted.

42. Kumar, P.* & **A. Khani**, (2023), Schedule-based Transit Assignment with Online Bus Arrival Information. *Transportation Research Part C: Emerging Technologies*, 155, 104282, https://doi.org/10.1016/j.trc.2023.104282.

41. Emami, B. & **A. Khani***, (2023), Nonlinear Complementarity Model for Mixed User Equilibrium Traffic Assignment and Mode Choice of Electric and Gasoline Vehicles. *Transportation Research Record*, Vol. 2677(6), PP 513-529, https://doi.org/10.1177/03611981221149433.

40. Han, B.*, W. Song, **A. Khani**, X. Yu, & J. Zhai. (2023), Stability and Mechanism of Speed Distribution in Ultra-narrow Vehicle Lane Traffic Flow. *Proceedings of the Institution of Civil Engineers - Transport*, Vol. 176 (2), PP 88-97, https://doi.org/10.1680/jtran.19.00134.

39. Yu, X., J. Chen*, P. Kumar, **A. Khani**, & H. Mao, (2022), An integrated optimization framework for locating depots in shared autonomous vehicle systems. *Transportmetrica A: Transport Science*, Vol. 20(2), PP 1-39, https://doi.org/10.1080/23249935.2022.2152299.

38. Kumar, P.*, & **A. Khani**, (2022), Planning of integrated mobility-on-demand and urban transit networks. *Transportation Research Part A: Policy and Practice*, Vol. 166, PP 499-521, https://doi.org/10.1016/j.tra.2022.11.001.

37. Yu, X.*, **A. Khani**, J. Chen., H. Xu & H. Mao, (2022) Real-Time Holding Control for Transfer Synchronization via Robust Multiagent Reinforcement Learning. *IEEE Transactions on Intelligent Transportation Systems*, Vol. 23(12), PP 23993-24007, https://doi.org/10.1109/TITS.2022.3204805.

36. de Oliveira, J. L. M.*, G. Davis, **A. Khani** & M. Marasteanu, (2022), Heterogeneous Markov Chain Model to Predict Pavement Performance and Deterioration. *Transportation Research Record*, Vol. 2676(9), PP 568-581, https://doi.org/10.1177/03611981221088222.

35. Tomhave, B. & **A. Khani***, (2022), Refined Choice Set Generation and the Investigation of Multi-criterion Transit Route Choice Behavior. *Transportation Research Part A: Policy and Practice*, Vol. 155, PP 484-500, https://doi.org/10.1016/j.tra.2021.11.005.

34. Emami, B.D., Y. Song & **A. Khani***, (2022), Prioritizing Bus Routes for Electrification: A GIS-based Multi-Criteria Analysis Considering Operational, Environmental and Social Benefits and Costs. *Transportation Research Record*, Vol. 2676(8), PP 10-23, https://doi.org/10.1177/03611981221082565.

33. Li, X.*, Wu, Y.J. and **Khani, A.**, (2022), Investigating a small-sized bike-sharing system's impact on transit usage: a synthetic control analysis in Tucson, Arizona. *Public Transport*, Vol. 14(2), PP 441-458, https://doi.org/10.1007/s12469-021-00278-w.

32. Kumar, P. & **A. Khani***, (2021), Adaptive park-and-ride choice on time-dependent stochastic multimodal transportation network. *Networks and Spatial Economics*, Vol. 21(4), PP 771-800, https://doi.org/10.1007/s11067-021-09545-6.

31. Zhang, Y. & **A. Khani***, (2021), Integrating Transit Systems with Ride-sourcing Services: A Study on the System Users' Stochastic Equilibrium Problem. *Transportation Research Part A: Policy and Practice*, Vol. 150, PP 95-123, https://doi.org/10.1016/j.tra.2021.05.008.

30. Kumar, P., **A. Khani***, E. Lind & J. Levin, (2021), Estimation and Mitigation of Epidemic Risk on Public Transit Route Using Automatic Passenger Count Data. *Transportation Research Record*, Vol. 2675(5), PP 94-106 https://doi.org/10.1177/0361198120985133.

29. Kumar, P. & **A. Khani***, (2021), An algorithm for integrating peer-to-peer ridesharing and schedule-based transit system for first mile/last mile access. *Transportation Research Part C: Emerging Technologies*, Vol. 122(102891) https://doi.org/10.1016/j.trc.2020.102891.

28. Cui, Y., R. Makhija, R. Chen, Q. He*, & **A. Khani**, (2021), Understanding and Modeling the Social Preferences in Rideshare Matching. *Transportation*, Vol. 48, PP 1809–1835, https://doi.org/10.1007/s11116-020-10112-0.

27. Li, X.*, A. Cottam, Y.J. Wu, & **A. Khani**, (2020), Can a bikesharing system reduce fuel consumption? Case study in Tucson, Arizona. *Transportation Research Part D: Transport and Environment*, https://doi.org/10.1016/j.trd.2020.102604.

26. Levin, M.*, E. Wong, B. Nault-Maurer & **A. Khani**, (2020), Parking infrastructure design for repositioning autonomous vehicles. *Transportation Research Part C: Emerging Technologies*, Vol. 120 (102838), https://doi.org/10.1016/j.trc.2020.102838.

25. Kumar, P. & **A. Khani***, (2020), Evaluating Special Event Transit Demand: A Robust Principal Component Analysis Approach. *IEEE Transactions on Intelligent Transportation Systems*, Vol. 22(12), PP 7370-7382 https://doi.org/10.1109/TITS.2020.3001470.

24. Webb, A., P. Kumar, & **A. Khani***, (2020) Estimation of Passenger Waiting Time using Automatically Collected Transit Data. *Public Transport*, Vol. 12(2), PP 299-311, https://doi.org/10.1007/s12469-020-00229-x.

23. Zhang, Y. & **A. Khani***, (2020), Identifying Critical Links in Transportation Network Design Problems for Maximizing Network Accessibility. *Transportation Research Record*, Vol. 2674(2), PP 237-251, https://doi.org/10.1177/0361198120906823.

22. Webb, A. & **A. Khani***, (2020), Park-and-Ride Choice Behavior in a Multimodal Network with Overlapping Routes. *Transportation Research Record*, Vol. 2674(3), PP 150-160, https://doi.org/10.1177/0361198120908866.

21. Tomhave, B., Y. Zhang, **A. Khani***, P. Dirks, & J. Hourdos, (2020), The Effects of Arterial BRT-Lite Dwell Time on General Traffic And Intersection Capacity. *Journal of Transportation Engineering, Part A: Systems*, Vol. 146(4), PP 0402001.

20. Laszlo, H., A. Bota*, M. Kresz, **A. Khani**, & L. M. Gardner, (2020), Discovering the hidden community structure of public transportation networks. *Networks and Spatial Economics*, Vol. 20 (1), PP 209-231, https://doi.org/10.1007/s11067-019-09476-3.

19. **Khani, A.***, (2019), An online shortest path algorithm for reliable routing in schedule-based transit networks considering transfer failure probability. *Transportation Research Part B: Methodological*, Vol. 126, PP 549-564, https://doi.org/10.1016/j.trb.2019.04.009.

18. Kumar, P., **A. Khani***, & G. Davis, (2019), Transit Route Origin-Destination Matrix Estimation Using Compressed Sensing. *Transportation Research Record, Journal of Transportation Research Board*, Vol. 2673(10) PP 164-174, https://doi.org/10.1177/0361198119845896.

17. Zhang, Y. & **A. Khani***, (2019), An algorithm for reliable shortest path problem with travel time correlations. *Transportation Research Part B: Methodological*, Vol. 121, PP 92-113.

16. Kumar, P., **A. Khani*** & Q. He, (2018), A Robust Method for Estimating Transit Passenger Trajectories Using Automated Data. *Transportation Research Part C: Emerging Technologies*, Vol. 95, PP 731-747.

15. Lu, K.*, **A. Khani**, & B. Han, (2018), A Trip Purpose-Based Data-Driven Alighting Station Choice Model Using Transit Smart Card Data. *Complexity*, DOI: 3412070.

14. Cui, Y., Q. He*, & **A. Khani**, (2018), Travel Behavior Classification: An Approach with Social Network and Deep Learning. *Transportation Research Record, Journal of Transportation Research Board*, Vol. 2672(47), PP 68-80.

13. Levin, M.* & **A. Khani**, (2018), Dynamic Transit Lane for Autonomous Vehicles. *Public Transport*, Vol. 10(3), PP 399-426.

12. Wong, E. & **A. Khani***, (2018), Transit Delay Estimation Using Stop-Level Automated Passenger Count Data. *Journal of Transportation Engineering, Part A: Systems*, Vol. 144(3), 04018005.

11. Pang, H.* & **A. Khani**, (2018), Modeling Park-and-Ride Location Choice of Heterogeneous Commuters. *Transportation*, Vol. 45(1), PP 71-87.

10. Bota, A.*, L. M. Gardner, & **A. Khani**, (2017), Identifying Critical Components of a Public Transit System for Outbreak Control. *Networks and Spatial Economics*, Vol. 17(4), PP 1137-1159.

9. Khani*, A. & S. Boyles, (2015), An Exact Algorithm for the Mean-Standard Deviation Shortest Path Problem, *Transportation Research Part B: Methodological*, Vol. 81, PP 252-266, https://doi.org/10.1016/j.trb.2015.04.002.

8. **Khani, A.***, M. Hickman, & H. Noh, (2015), Trip-Based Path Algorithms Using the Transit Network Hierarchy, *Networks and Spatial Economics*, Vol. 15(3), PP 635-653.

7. Perrine, K.A.*, **A. Khani**, & N. Ruiz Juri, (2015), A Map-Matching Algorithm for Applications in Multimodal Transportation Network Modeling, *Transportation Research Record, Journal of Transportation Research Board*, Vol. 2537, PP 62-70.

6. **Khani, A.***, B. Bustillos, H. Noh, Y.C. Chiu, & M. Hickman, (2014), Modeling Transit and Intermodal Tours in a Dynamic Multimodal Network, *Transportation Research Record, Journal of Transportation Research Board*, Vol. 2467, PP 21-29.

5. **Khani, A.***, S. Lee, M. Hickman, H. Noh, & N. Nassir, (2012), Intermodal Path Algorithm for Time-Dependent Auto Network and Scheduled Transit Service, *Transportation Research Record, Journal of Transportation Research Board*, Vol. 2284, PP 40-46.

4. Nassir, N.*, **A. Khani**, M. Hickman, & H. Noh, (2012), Algorithm for Intermodal Optimal Multidestination Tour with Dynamic Travel Times, *Transportation Research Record, Journal of Transportation Research Board*, Vol. 2283, PP 57-66.

3. Noh, H.*, M. Hickman, & **A. Khani**, (2012), Hyperpath in Network Based on Transit Schedules, *Transportation Research Record, Journal of Transportation Research Board*, Vol. 2284, PP 29-39.

2. Nassir, N.*, **A. Khani**, S. Lee, H. Noh, & M. Hickman, (2011), Transit Stop-level O-D Estimation Using Transit Schedule and Automated Data Collection System, *Transportation Research Record, Journal of Transportation Research Board*, Vol. 2263, PP 140-150.

1. Shafahi, Y.* & **A. Khani**, (2010), A Practical Model for Transfer Optimization in a Transit Network: Model Formulations and Solutions, *Transportation Research Part A: Policy and Practice*, Vol. 44, No. 6, PP 377-389.

Refereed Conference Proceedings

53. Aalipour, A.* & **A. Khani**, Designing an Autonomous Mobility-on-Demand Service for Transit Last Mile Access. *103rd Annual Meeting of Transportation Research Board*, Washington, DC, Jan. 7-11, 2024.

52. DeBruin, H.* & **A. Khani**, GIS-Based Comprehensive Shared Micromobility Station Siting Optimization for Small Urban Areas. *103rd Annual Meeting of Transportation Research Board*, Washington, DC, Jan. 7-11, 2024.

51. Baek, K.* & **A. Khani**, A DRT-Bus Intermodal Rural Transit Operation Powered by Mobility-as-a-Service Applying Differentiated Dispatch Priorities. *103rd Annual Meeting of Transportation Research Board*, Washington, DC, Jan. 7-11, 2024.

50. Aalipour, A.* & **A. Khani**, Efficient and Real-Time Reinforcement Learning for Linear Quadratic Systems with Application to H-Infinity Control. *62nd IEEE Conference on Decision and Control (CDC)*, Singapore, Singapore, Dec. 13-15, 2023.

49. Baek, K.* & **A. Khani**, How Do People Value Reliable Modes in Their Transit Path Choice? *9th International Symposium on Transport Network Resilience (INSTR)*, Hong Kong SAR, Dec. 13-14, 2023.

48. Emami, B.D. & **A. Khani***, Charging Infrastructure Planning for Networks Including Electric and Diesel Trucks. *102nd Annual Meeting of Transportation Research Board*, Washington, DC, Jan. 8-12, 2023.

47. Aalipour, A. & **A. Khani***, Modeling and Control of Autonomous Mobility-on-Demand System in Urban Networks: A Model Predictive Approach. *101st Annual Meeting of Transportation Research Board*, Washington, DC, Jan. 9-13, 2022.

46. Emami, B.D., Y. Zhang, **A. Khani*** & Y. Song, Incremental Electrification of Bus Transit Network: A Multi-Phase Optimization Approach with Stochastic Energy Consumption. *101st Annual Meeting of Transportation Research Board*, Washington, DC, Jan. 9-13, 2022.

45. Asp, J.*, G. Davis, **A. Khani** & M. Marasteanu, A Heterogeneous Markov Chain Model to Predict Pavement Performance and Deterioration. *101st Annual Meeting of Transportation Research Board*, Washington, DC, Jan. 9-13, 2022.

44. Emami, B.D., Y. Song & **A. Khani***, Prioritizing Bus Routes for Electrification: A GIS-based Multi-Criteria Analysis Considering Operational, Environmental and Social Benefits and Costs. *100th Annual Meeting of Transportation Research Board*, Washington, DC, Jan. 21-29, 2021.

43. Kumar, P., E. Lind, J. Levin & **A. Khani***, Estimation and Mitigation of Epidemic Risk on a Public Transit Route Using Automatic Passenger Count Data. *100th Annual Meeting of Transportation Research Board*, Washington, DC, Jan. 21-29, 2021.

42. Yu, X. & **A. Khani***, Real-time Transit Control for Transfer Synchronization with Deep Reinforcement Learning. *100th Annual Meeting of Transportation Research Board*, Washington, DC, Jan. 21-29, 2021.

41. Zhang, Y. & **A. Khani***, Identifying Critical Links in Transportation Network Design Problems for Maximizing Network Accessibility. *99th Annual Meeting of Transportation Research Board*, Washington, DC, Jan. 12-16, 2020.

40. Kumar, P. & **A. Khani***, Adaptive Park and Ride Choice on Time-dependent Stochastic Multimodal Transportation Network. *99th Annual Meeting of Transportation Research Board*, Washington, DC, Jan. 12-16, 2020.

39. Tomhave, B. & **A. Khani***, Refined Choice Set Generation and The Investigation of Multicriterion Transit Route Choice Behavior. *99th Annual Meeting of Transportation Research Board*, Washington, DC, Jan. 12-16, 2020.

38. Webb, A. & **A. Khani***, Park-and-Ride Choice Behavior in a Multimodal Network with Overlapping Routes. *99th Annual Meeting of Transportation Research Board*, Washington, DC, Jan. 12-16, 2020.

37. Kumar, P., **A. Khani***, & G. Davis, Transit Route Origin-Destination Matrix Estimation Using Compressed Sensing. *98th Annual Meeting of Transportation Research Board*, Washington, DC, Jan. 13-17, 2019.

36. Tomhave, B., Y. Zhang, & **A. Khani***, The Effects of Arterial BRT-Lite Dwell Time on General Traffic And Intersection Capacity. *98th Annual Meeting of Transportation Research Board*, Washington, DC, Jan. 13-17, 2019.

35. Schmit, M., **A. Khani***, Y. Zhang, J. Hourdos, & L. Munnich, Informing Political Debate Through Data-Driven Policymaking: Summary of The Washington I-405 Traffic Data and Corridor Performance Analysis. *98th Annual Meeting of Transportation Research Board*, Washington, DC, Jan. 13-17, 2019.

34. **A. Khani***. Real-time Transit Control Using Markov Decision Process: A Case Study for Transfer Coordination. *14th International Conference on Advanced Systems in Public Transport*, Brisbane, QLD, Jul. 23-25, 2018.

33. Zhang, Y. & **A. Khani***, An Optimization Model for a Station-based Bike sharing System Rebalancing Problem, 7th International Symposium on Dynamic Traffic Assignment, Hong Kong, Jun. 6-8, 2018.

32. **A. Khani***. Adaptive Park-and-ride Decision along a Corridor with Time-dependent and Uncertain Travel Times. *7th International Conference on Transport Network Reliability*, Sydney, NSW, Jan. 17-19, 2018.

31. Nowak, J. & **A. Khani***. Transit Riders and the Subjectively Shortest Path: A Look into Transit System Resilience and User Choice Preferences. *97th Annual Meeting of Transportation Research Board*, Washington, DC, Jan. 7-11, 2018.

30. Zhang, Y., & **A. Khani***. An Algorithm for Robust Shortest Path Problem with Travel Time Correlations. *97th Annual Meeting of Transportation Research Board*, Washington, DC, Jan. 7-11, 2018.

29. Kumar, P., **A. Khani*** & Q. He. A Probabilistic Trip Chaining Algorithm for Transit Origin-Destination Matrix Estimation Using Automated Data. *97th Annual Meeting of Transportation Research Board*, Washington, DC, Jan. 7-11, 2018.

28. Cui, Y., He, Q.*, & **A. Khani**. Travel Behavior Classification: An Approach with Social Network and Deep Learning. *97th Annual Meeting of Transportation Research Board*, Washington, DC, Jan. 7-11, 2018.

27. Zhang, Y. & **A. Khani***. An Algorithm for Transit Assignment Problem with Flow-dependent Dwell Times. *Transportation and Logistics Conference, INFORMS*, Chicago, Jul. 2017.

26. Kumar, P. & **A. Khani***. Finding Optimal Park-and-ride Facility Locations in an Urban Network. *Transportation and Logistics Conference, INFORMS*, Chicago, Jul. 2017.

25. Bota, A., L. Gardner*, & **A. Khani**, Modeling the Spread of Infection in Public Transit Networks: A Decision-support Tool for Outbreak Planning and Control. *96th Annual Meeting of Transportation Research Board*, Washington, DC, Jan. 8-12, 2017.

24. **Khani, A.***, Reliable Routing in Schedule-based Transit Networks, *6th International Symposium on Dynamic Traffic Assignment*, Sydney, NSW, Jun. 28-30, 2016.

23. Gemar, M.*, J. Duthie, **A. Khani**, J. Archer, N. Ruiz-Juri, & K. Perrine, Integrated Dynamic Traffic and Transit Assignment for Multimodal Corridor Study, *6th Transportation Research Board Conference on Innovations in Travel Modeling*, Denver, CO, May. 1-4, 2016.

22. **Khani, A.***, & H. Pang, Modeling Park-and-ride Location Choice for Intermodal Trips, *95th Annual Meeting of Transportation Research Board*, Washington, DC, Jan. 10-14, 2016.

21. Jafari, E.*, T. Rambha, & **A. Khani**, The For-Profit Dial-a-Ride Problem on Dynamic Networks. *95th Annual Meeting of Transportation Research Board*, Washington, DC, Jan. 10-14, 2016.

20. Beduhn, T.*, **A. Khani**, & M. Hickman, Using Transit ITS Data for Modeling Network Reliability and the Impact on Passenger Route Choice, *6th International Symposium on Transportation Network Reliability*, Nara, Japan, Aug. 2-3, 2015.

19. Beduhn, T.*, **A. Khani**, & S. Boyles, Reliable Routing in a Schedule-based Transit Network, *94th Annual Meeting of Transportation Research Board*, Washington, DC, Jan. 11-15, 2015.

18. **Khani, A.***, E. Jafari, J. Archer, & T. Beduhn, The Impact of Network Accessibility on Schedule-based Transit Assignment, *94th Annual Meeting of Transportation Research Board*, Washington, DC, Jan. 11-15, 2015.

17. Perrine, K.A.*, **A. Khani**, & N. Ruiz Juri, A Map-Matching Algorithm for Applications in Multimodal Transportation Network Modeling, *94th Annual Meeting of Transportation Research Board*, Washington, DC, Jan. 11-15, 2015.

16. Khani*, A. & M. Hickman, Incorporating Network Reliability in a Schedule-based Transit Assignment Model, *5th International Symposium in Dynamic Traffic Assignment*, Salerno, Italy, Jun. 17-19, 2014.

15. **Khani, A.***, T. Beduhn, J. Duthie, S. Boyles, & E. Jafari, A Transit Route Choice Model for Application in Dynamic Transit Assignment, *5th Transportation Research Board Conference on Innovations in Travel Modeling*, Baltimore, MD, Apr. 27-30, 2014.

14. **Khani, A.***, B. Bustillos, H. Noh, M. Hickman, & Y.C. Chiu, Modeling Transit and Intermodal Tours in a Dynamic Multimodal Network, *93rd Annual Meeting of Transportation Research Board*, Washington, DC, Jan. 12-16, 2014.

13. **Khani, A.***, V. Livshits, & A. Dutta, Modeling Regional Bicycle Travel in Phoenix Metropolitan Area, *93rd Annual Meeting of Transportation Research Board*, Washington, DC, Jan. 12-16, 2014.

12. **Khani, A.***, E. Sall, L. Zorn, & M. Hickman, Integration of the FAST-TrIPs Person-Based Dynamic Transit Assignment Model, the SF-CHAMP Regional Activity-Based Travel Demand Model, and San Francisco's Citywide Dynamic Traffic Assignment Model, *92nd Annual Meeting of Transportation Research Board*, Washington, DC, Jan. 13-17, 2013.

11. Lee, S.*, **A. Khani**, & M. Hickman, Estimating Individual Travel Times for Public Transit Passengers, Paper No. 1406, *ITE 2012 Annual Meeting and Exhibit*, Atlanta, GA, Aug. 12-15, 2012.

10. **Khani, A.***, M. Hickman, & H. Noh, Trip-Based Path Algorithms Using Transit Network Hierarchy (TBPATH), *4th International Symposium on Dynamic Traffic Assignment*, Martha's Vineyard, MA, Jun. 4-6, 2012.

9. Noh, H.*, **A. Khani**, Y.C. Chiu, M. Hickman & B. Bustillos, Integration of Dynamic Traffic Assignment with Schedule-Based Transit Assignment and Simulation of Congested Multimodal Networks, *4th International Symposium on Dynamic Traffic Assignment*, Martha's Vineyard, MA, Jun. 4-6, 2012.

8. Noh, H.*, M. Hickman, & **A. Khani**, Logit-based Congested Transit Assignment Using Hyperpaths on a Scheduled Transit Network, *4th International Symposium on Dynamic Traffic Assignment*, Martha's Vineyard, MA, Jun. 4-6, 2012.

7. Noh, H.*, **A. Khani**, M. Hickman, Ye Tian, & Y.C. Chiu, Integrated Vehicle and Passenger Simulation Model Considering Multimodal Transportation Network, *4th Transportation Research Board Conference on Innovations in Travel Modeling*, Tampa, FL, Apr. 30-May. 2, 2012.

6. **Khani, A.***, S. Lee, M. Hickman, H. Noh, & N. Nassir, An Intermodal Shortest and Optimal Path Algorithm Using a Transit Trip-Based Shortest Path (TBSP), *91st Annual Meeting of Transportation Research Board*, Washington, DC, Jan. 22-26, 2012.

5. Nassir, N.*, **A. Khani**, M. Hickman, & H. Noh, An Intermodal Optimal Multi-Destination Tour Algorithm with Dynamic Travel Times, *91st Annual Meeting of Transportation Research Board*, Washington, DC, Jan. 22-26, 2012.

4. Noh, H.*, M. Hickman, & **A. Khani**, Hyperpaths in a Transit Schedule-based Network, *91st Annual Meeting of Transportation Research Board*, Washington, DC, Jan. 22-26, 2012.

3. Nassir, N.*, **A. Khani**, S. Lee, H. Noh, & M. Hickman, Transit Stop-level O-D Estimation Using Transit Schedule and Automated Data Collection System, *90th Annual Meeting of Transportation Research Board*, Washington, DC, Jan. 23-27, 2011.

2. **Khani, A.*** & Y. Shafahi, Transfer Optimization in Transit Networks: Headway and Departure Time Coordination, *14th International IEEE Conference on Intelligent Transportation Systems (ITSC)*, PP 1531-1536, Washington, DC, Oct. 5-7, 2011.

1. Shafahi, Y.* & **A. Khani**, Transfer Coordination in Public Transportation (In Persian), *8th International Congress on Civil Engineering*, Shiraz University, Shiraz, Iran, 2009.

Technical Reports

16. Emami, B.D. & **A. Khani***. Benefits and Barriers to Electrification of the Freight System in Minnesota. White paper for Minnesota Freight Advisery Council, May. 2022.

15. De Oliveira, J.M., **A. Khani**, G. Davis, & M. Marasteanu. Remaining Service Life Asset Measure, Phase 2. Report to Minnesota Department of Transportation, Feb. 2022.

14. Webb, A, T. Tao, **A. Khani***, J. Cao, & X. Wu. Impact of Transitways on Travel on Parallel and Adjacent Roads and Park-and-ride Facilities. Report to Minnesota Department of Transportation, Jan. 2022.

13. Zhang, Y., **A. Khani***, J. Schaefer, K. Keeling, & M. Figliozzi. Evaluating the Growth of Last-Mile Deliveries and Innovations to Reduce Freight Curb Space Demand. Report to Freight Mobility Research Institute, June. 2021.

12. Zhang, Y., **A. Khani***, & J. Hourdos. Optimization of Winter Maintenance Stations for Safe and Efficient Freight Transportation. Report to Freight Mobility Research Institute, Apr. 2020.

11. Guthrie, A., Y. Fan, **A. Khani**, & J. Nowak. Multimodal Connections with Transitways: Ridership, Access Mode, and Route Choice Implications. Report to Transitways Research Impact Project (Sponsore: Metropolitan Council and Hennepin County), Mar. 2019.

10. Tomhave, B., Y. Zhang, **A. Khani***, J. Hourdos, P. Dirks, J. Olsson, T. Tao, X. Wu, & X. Cao, After Study of the Bus Rapid Transit A Line Impacts. Report to Minnesota Department of Transportation, Dec. 2018.

9. Schmit, M.*, & **A. Khani**, I-405 Traffic Data and Corridor Performance Analysis, Report for Washington State Joint Transportation Committee, Jan. 2018.

8. Kumar, P. & **A. Khani***, Metro Transit U-Pass Data Analysis, Report for Metro Transit, Nov. 2017.

7. Blodgett, M., **A. Khani**, D. Negoescu, & S. Benjaafar*, Public/Private Partnerships in Transit: Case Studies and Analysis, Report for Minnesota Council on Transportation Access (MCOTA), Aug. 2017.

6. Nowak, J. & **A. Khani***, Transit Network Modeling with FAST-TrIPs Model: Ridership Estimation on the Twin Cities Network Before and After Metro Green Line Implementation, Transit Lab, University of Minnesota, Jan. 2017.

5. **Khani, A.***, N. Ruiz-Juri, K. Perrine, & J. Duthie, Integrated Model of VISTA Dynamic Traffic Assignment and FAST-TrIPs Schedule-based Transit Assignment, Network Modeling Center, University of Texas at Austin, 2014.

4. **Khani, A.**, N. Ruiz-Juri*, & J. Duthie, A Web-based Tool for Visualization of Transit Model Results, Network Modeling Center, University of Texas at Austin, 2014.

3. Beduhn, T., **A. Khani** & J. Duthie*, Advanced Transit Modeling at NMC: A Draft Report to CAMPO, Network Modeling Center, University of Texas at Austin, 2014.

2. Beduhn, T. & **A. Khani***, FAST-TrIPs User's Manual, Network Modeling Center, University of Texas at Austin, 2014.

1. Chiu, Y.C.*, **A. Khani**, H. Noh, B. Bustillos, & M. Hickman, Technical Report on SHRP 2 C10-B Version of DynusT and FAST-TrIPs, Technical Report to SHRP 2 Program, Federal Highway Administration, 2013.

Presentations (does not include conference proceedings listed above)

Underline indicates student in Khani's research group
The first name is, in general, the presenter

Conference Presentations

51. **Khani, A.**, Planning and Optimization of Electric Trucks Charging Stations in Minnesota. *NCITE/CTS Transportation Symposium Symposium*, Minneapolis, MN, Oct. 26, 2023.

50. Tork, N. & **A. Khani**, Electric Vehicle Charging Behavior Optimization in Congested Network Environments, *INFORMS Annual Meeting*, Phoenix, AZ, Oct. 15-18, 2023.

49. DeBruin, H. & **A. Khani**, GIS-Based Comprehensive Shared Micromobility Station/Corral Siting Optimization for Small Urban Areas, *Innovations in Travel Analysis and Planning*, Indianapolis, IN, Jun 4-6, 2023.

48. Aalipour, A. & **A. Khani**, Modeling and Control of Autonomous Mobility-on-Demand Systems: A Model Predictive Approach, *American Control Conference (ACC)*, San Diego, CA, May 33 - Jun. 2, 2023.

47. Aalipour, A. & **A. Khani**, Data-efficient and Real-time Reinforcement Learning for an Autonomous-Mobility-on-Demand System, *American Control Conference (ACC)*, San Diego, CA, May 33 - Jun. 2, 2023.

46. **Khani, A.**, Electrification of the Freight System in Minnesota: Barriers, Opportunities, and a Multi-criteria Planning Tool, *American Trucking Association (ATA) Technology and Maintenance Council (TMC)*, Orlando, FL, Mar. 8-11, 2022.

45. **Khani, A.**, Toward Electrification of Freight Transportation: An Overview of the Barriers and Opportunities, *Southeast Region UTC Conference*, Florida Atlantic University, Boca Raton, FL, Mar. 24-25, 2022.

44. Kumar, P. & **A. Khani**, Transit Network Design with Passenger Assignment Constraint, *INFORMS Annual Meeting*, Anaheim, CA, Oct. 24-27, 2021.

43. Zhang, Y. & **A. Khani**, Shared Lockers System Design for Last-mile Deliveries. *INFORMS Annual Meeting*, Nov. 7-13, 2020, Virtual.

42. Zhang, Y. & **A. Khani**, Shared Locker System Design and Truck Routing for the Last-mile Delivery. *The 23rd IEEE International Conference on Intelligent Transportation Systems*, Sep. 20, 2020, Virtual.

41. Kumar, P. & **A. Khani**, Transit Origin-Destination Estimation for Special Events: A Compressed Sensing Approach, *6th International Symposium on Transit Data*, Aug. 11-13, 2020, Virtual.

40. Tomhave, B. & **A. Khani**, Toward a Twin Cities Transit Route Choice Model, *CTS Research Conference, University of Minnesota*, Minneapolis, MN, Nov. 7, 2019.

39. Webb, A. & **A. Khani**, Park and Ride User Behavior in the Twin Cities, *CTS Research Conference, University of Minnesota*, Minneapolis, MN, Nov. 7, 2019.

38. Kumar, P. & **A. Khani**, Adaptive park-and-ride choice on time-dependent stochastic multimodal transportation network, *INFORMS Annual Meeting*, Seattle, WA, Oct. 20-23, 2019.

37. Kumar, P. & **A. Khani**, Finding optimal park-and-ride facility locations in an urban network, *INFORMS Annual Meeting*, Seattle, WA, Oct. 20-23, 2019.

36. Zhang, Y. & **A. Khani**, A Linear Programming-based Algorithm for Traffic Assignment Problem with Link Interaction, *INFORMS Annual Meeting*, Seattle, WA, Oct. 20-23, 2019.

35. Yu, X. & **A. Khani**, Operation of shared autonomous vehicle systems: optimal fleet sizing and depot deployment, *INFORMS Annual Meeting*, Seattle, WA, Oct. 20-23, 2019.

34. Kumar, P. & **A. Khani**, User and System Optimal Matching for Dynamic Ride Sharing Systems, *INFORMS Annual Meeting*, Phoenix, AZ, Nov. 4-7, 2018.

33. Zhang, Y. & **A. Khani**, A Stochastic User Equilibrium Model for Integrated Transit and Ride-Sourcing Services, *INFORMS Annual Meeting*, Phoenix, AZ, Nov. 4-7, 2018.

32. Nowak, J. & **A. Khani**, Multimodal Access to Twin Cities Transitways, *CTS Research Conference, University of Minnesota*, Minneapolis, MN, Nov. 1, 2018.

31. Kumar, P. & **A. Khani**, Matching for Dynamic Ride-Sharing Systems, *CTS Research Conference, University of Minnesota*, Minneapolis, MN, Nov. 1, 2018.

30. Zhang, Y. & **A. Khani**, Improving Travel Mobility by Integrating Public Transit and Ride Sourcing Services, *CTS Research Conference, University of Minnesota*, Minneapolis, MN, Nov. 1, 2018.

29. Nowak, J. & **A. Khani**, Evaluating Transit Route Choice in the Twin Cities, *CTS Research Conference, University of Minnesota*, Minneapolis, MN, Nov. 1, 2017.

28. Zhang, Y. & **A. Khani**, Time Series Data Clustering of Minnesota Bike Sharing System and Operation Strategy, *CTS Research Conference, University of Minnesota*, Minneapolis, MN, Nov. 1, 2017.

27. Kumar, P. & **A. Khani**, Analyzing U-Pass Ridership Trends, *CTS Research Conference, University of Minnesota*, Minneapolis, MN, Nov. 1, 2017.

26. Nowak, J. & **A. Khani**, Time-Dependent Origin Destination Matrix Calibration for Transit Network Modeling, *INFORMS Annual Meeting*, Houston, TX, Oct. 22-25, 2017.

25. Kumar, P. & **A. Khani**, Special Event Transit Demand Estimation using AFC Data, *INFORMS Annual Meeting*, Houston, TX, Oct. 22-25, 2017.

24. Zhang, Y. & **A. Khani**, Optimal Snow Removal Facility Locations for Stochastic Snowfall, *INFORMS Annual Meeting*, Houston, TX, Oct. 22-25, 2017.

23. Liu, K., B. Han, & **A. Khani**, Passenger Behavior Analysis in Beijing Metro Network using AFC Data and Agent-based Simulation, *INFORMS Annual Meeting*, Houston, TX, Oct. 22-25, 2017.

22. Cui, Y. Q. He, & **A. Khani**, Travel Behavior Classification with Social Network and Deep Learning, *INFORMS Annual Meeting*, Houston, TX, Oct. 22-25, 2017.

21. Nault-Maurer, B., & **A. Khani**, Walking Accessibility Improvements for Application in Transit Assignment Models, *Minnesota Transportation Conference*, St. Paul, MN, Mar. 1-2, 2017.

20. **A. Khani**, System Optimal Transit Assignment with Flow Dependent Dwell Times, *INFORMS Annual Meeting*, Nashville, TN, Nov. 13-16, 2016.

19. Gardner, L., A. Bota, & **A. Khani**, Identifying Critical Components Of The Public Transit Network To Mitigate Contagion Episodes, *INFORMS Annual Meeting*, Nashville, TN, Nov. 13-16, 2016.

18. **A. Khani**, Modeling Park-and-Ride Location Choice of Heterogeneous Commuters, Annual CTS Transportation Research Conference, University of Minnesota, Nov. 3, 2016.

17. **Khani, A.**, Modeling Transit Reliability: A Schedule-based Approach with GTFS and AVL Data, *6th Transportation Research Board Conference on Innovations in Travel Modeling*, Denver, CO, May. 1-4, 2016.

16. **Khani, A.** & S. Boyles, Reliable Routing in Schedule-based Transit Networks with Stochastic Travel Times, *INFORMS Annual Meeting*, Philadelphia, PA, Nov. 1-4, 2015.

15. **Khani, A.**, E. Jafari, T. Rambha, & S. Boyles, Auction-based Ridesharing with Pick-up and Drop-off Time Window, *INFORMS Annual Meeting*, Philadelphia, PA, Nov. 1-4, 2015.

14. **Khani, A.**, G. Abram, N. Ruiz-Juri, & J. Duthie, A Web-based Tool for Visualization of Transit Modeling Results and Data, *15th TRB National Transportation Planning Applications Conference*, Atlantic City, NJ, May. 17-21, 2015.

13. Hickman, M., **A. Khani**, & K. Perrine, Open Source Tools and ITS Data for Transit Modeling and Visualization. Workshop on Analyzing, Validating and Visualizing Results from Modeling: The Role of Big Data and New Technologies. *94th Annual Meeting of Transportation Research Board*, Washington, DC, Jan. 11-15, 2015.

12. **Khani, A.** & S. Boyles, An Efficient Algorithm for Solving Reliable Shortest Path Problem, *INFORMS Annual Meeting*, San Francisco, CA, Nov. 9-12, 2014.

11. **Khani, A.** & Mark Hickman, Incorporating Travel Time Reliability in Schedule-based Transit Assignment, *INFORMS Annual Meeting*, San Francisco, CA, Nov. 9-12, 2014.

10. Hickman M. & **A. Khani**, A Schedule-based Transit Assignment with Capacities and Priority: A Multicommodity Flow Application, *INFORMS Annual Meeting*, San Francisco, CA, Nov. 9-12, 2014.

9. **Khani, A.** & M. Hickman, Model and Solution Algorithm for Schedule-based Transit Assignment, *INFORMS Annual Meeting*, Minneapolis, MN, Oct. 6-9, 2013.

8. **Khani, A.**, H. Noh, B. Bustillos, M. Hickman, & Y.C. Chiu, Modeling Transit and Intermodal Tours in a Dynamic Modeling Framework: Application of FAST-TrIPs in Sacramento Regional Transportation Network, *14th TRB National Transportation Planning Applications Conference*, Columbus, OH, May. 5-9, 2013.

7. Sall, E., **A. Khani**, L. Zorn, M. Hickman, & J. Castiglione, Measuring Reliability with FAST-TrIPs, An Open-Source, Person-Based Dynamic Transit Assignment Simulation Tool, *14th TRB National Transportation Planning Applications Conference*, Columbus, OH, May. 5-9, 2013.

6. **Khani, A.** & M. Hickman, A Simulation-based Transit Assignment, *INFORMS Annual Meeting*, Phoenix, AZ, Oct. 14-17, 2012.

5. Hickman, M., **A. Khani**, N. Nassir, & H. Noh, Modeling Transit in Regional Dynamic Travel Models: FAST-TrIPs, *INFORMS Annual Meeting*, Charlotte, NC, Nov. 13-16, 2011.

4. **Khani, A.**, S. Lee, H. Noh, N. Nassir, & M. Hickman, Using Transit ITS Data for Service Planning, *ITS Arizona 18th Annual Conference*, Mesa, AZ, Sep. 29, 2011.

3. **Khani, A.**, N. Nassir, S. Lee, H. Noh, & M. Hickman, Transit Path Choice Model Using Smart Card Data, *13th TRB National Transportation Planning Applications Conference*, Reno, NV, May. 8-12, 2011.

2. Noh, H., **A. Khani**, M. Hickman, & Y.C. Chiu, Integrated Dynamic Traffic and Transit Assignment Considering Traffic Congestion and a Schedule-Based Transit Network, *13th TRB National Transportation Planning Applications Conference*, Reno, NV, May. 8-12, 2011.

1. Lee, S., **A. Khani**, & M. Hickman, Aggregate level Origin-Destination Estimation Using Smart Card Data and Transit Schedule, *52nd Annual Transportation Research Forum*, Long Beach, CA, Mar. 10-12, 2011.

Invited Presentations

All presented by myself

30. Design and Operation of an Autonomous Mobility-on-Demand System for Transit Last Mile Access. *Koc University*, Istanbul, Turkey, Dec. 20, 2023.

29. Design and Operation of an Autonomous Mobility-on-Demand System for Transit Last Mile Access. *National University of Singapore*, Singapore, Singapore, Dec. 18, 2023.

28. Planning and Optimization of Electric Trucks Charging Stations in Minnesota. *Maricopa Association of Governments*, Phoenix, AZ, May 8, 2023.

27. Planning and Optimization of Electric Trucks Charging Stations in Minnesota. *University of Arizona*, Tucson, AZ, May 5, 2023.

26. Electrification of the Freight System in Minnesota: Barriers, Opportunities, and a Multicriteria Planning Tool. *Environment and Energy in Transportation Webinar, Center for Transportation Studies, University of Minnesota*, Minneapolis, MN, Apr. 19, 2022. .

25. Electrification of the Freight System in Minnesota: Barriers, Opportunities, and a Multicriteria Planning Tool. *American Trucking Association (ATA) Technical Advisory Group (TAG) Meeting*, Orlando, FL, Mar. 5, 2022.

24. Benefits and Barriers to Electrification of the Freight System in Minnesota, Minnesota Freight Advisory Council (MFAC), Dec. 10, 2021.

23. Innovative Strategies for Last-Mile Delivery in Urban Areas, *Transportation Planning and the Economy Research Council, Center for Transportation Studies, University of Minnesota*, Oct. 8, 2020.

22. Optimization of Last-mile Delivery with Shared Locker System, *Freight Mobility Research Institute Webinar, Florida Atlantic University*, Oct. 7, 2020.

21. Modeling and Optimization of Transportation Networks with Emerging Technologies, *Warren Lecture Series, University of Minnesota*, Sep. 25, 2020.

20. Decision Tool to Evaluate COVID-19 Risk to Metro Transit Riders: Impacts of the COVID-19 Pandemic on Minnesota's Traffic and Transit Networks, *Center for Transportation Studies, University of Minnesota*, Jun. 23, 2020.

19. Schedule-based Route Choice and Transit Assignment for the Twin Cities Region, *Travel Forecasting Committee, Metropolitan Council*, Dec. 19, 2019.

18. Modeling and Optimization of Transportation Infrastructure in the Era of Autonomous Vehicles, *Columbia University*, Dec. 3, 2019.

17. Modeling and Optimization of Transportation Infrastructure in the Era of Autonomous Vehicles, *Lehigh University*, Dec. 2, 2019.

16. Modeling and Optimization of Transportation Infrastructure in the Era of Autonomous Vehicles, *Chemical Engineering Seminar, University of Minnesota*, Nov. 15, 2019.

15. Transit Demand and Ridership Analysis using Smart Transit Data, *Tongji University, China*, Jul. 9, 2019.

14. Transit Demand and Ridership Analysis using Smart Transit Data, *Nanjing Forestry University, China*, Jul. 8, 2019.

13. Integration of Public Transit with Emerging Mobility Systems, *COTA International Conference of Transportation Professionals, Southeast University, China*, Jul. 5, 2019.

12. Transit Demand and Ridership Analysis using Smart Transit Data, *Pre-COTA Workshop, Beijing University of Technology, China*, Jul. 4, 2019.

11. After Study of the Bus Rapid Transit "A Line" Impacts, *Metropolitan Council Transportation committee*, Apr. 17, 2019.

10. After Study of the Bus Rapid Transit "A Line" Impacts, *Ramsey County Regional Rail Authority*, Feb. 26, 2019.

9. Algorithms for Solving the Reliable Shortest Path Problem, *Digital Technology Center Seminar, University of Minnesota*, Minneapolis, MN, Oct. 12, 2018.

8. Modeling Public Transportation Systems, *Student Leadership Summit, Midwestern ITE*, Minneapolis, MN, Aug. 18, 2018.

7. Robust Transit Demand and Ridership Analysis using Smart Transit Data, *Transport Engineering Seminar Series, The University of Sydney*, Sydney, NSW, Jul. 27, 2018.

6. Transit Demand Analysis and User Classification using Automatic Fare Collection (AFC) Data, *Friday Seminar, Portland State University*, Portland, OR, Mar. 9, 2018.

5. I-405 Traffic Data and Corridor Performance Study (joint presentation with Matt Schmit), *Transportation Commission, Washington State Department of Transportation*, Olympia, WA, Feb. 14, 2018.

4. I-405 Traffic Data and Corridor Performance Study (joint presentation with Matt Schmit), *Joint Transportation Committee, State of Washington*, Olympia, WA, Dec. 14, 2017.

3. The For-Profit Dial-a-Ride Problem on a Dynamic Network, *Industrial and Systems Engineering Seminar University of Minnesota*, Minneapolis, MN, Nov. 30, 2016.

2. Transportation Research Board webinar on Innovations in Public Transportation Planning and Modeling Utilizing General Transit Feed, Mar. 2016.

1. Transportation Research Board workshop on The Role of Big Data and New Technologies on Transportation Planning, Jan. 2016.

TEACHING AND CURRICULUM DEVELOPMENT

Courses Taught at the University of Minnesota

Fall 2022	CEGE-3201: Transportation Engineering (3 credits)
	CEGE-4214: Infrastructure Systems Engineering (3 credits)
	CEGE-5214: Infrastructure Systems Engineering (3 credits)
Spring 2022	CEGE-8217: Transportation Network Analysis (4 credits)
Fall 2021	CEGE-3201: Transportation Engineering (3 credits)
	CEGE-4160: Transportation Systems Engineering (3 credits)
	CEGE-5214: Transportation Systems Engineering (3 credits)
Spring 2021	CEGE-8217: Transportation Network Analysis (4 credits)
Fall 2020	CEGE-4011: Transportation Systems Engineering (3 credits)
	CEGE-5214: Transportation Systems Engineering (3 credits)
Spring 2020	CEGE-3201: Transportation Engineering (3 credits)
Fall 2019	CEGE-4011: Transportation Systems Planning and Operations (3 credits)
	CEGE-5180: Transportation Systems Planning and Operations (3 credits)
Spring 2019	CEGE-3201: Transportation Engineering (3 credits)
Fall 2018	CEGE-8217: Transportation Network Analysis (4 credits)
Spring 2018	CEGE-3201: Transportation Engineering (3 credits)
Fall 2017	CEGE-8490: Special Topic: Dynamic Traffic Assignment (4 credits)
Spring 2017	CEGE-3201: Transportation Engineering (3 credits)
Fall 2016	CEGE-8217: Transportation Network Analysis (4 credits)
Spring 2016	CEGE-3201: Transportation Engineering (3 credits)

Courses Taught at Azad University of Parand, Iran

Spring 2009	Systems Engineering
Spring 2009	Traffic Engineering
Spring 2009	Highway Design

ADVISING AND MENTORING

Undergraduate Students

Undergraduate Research Projects

14. Sophia Harman, Undergraduate Research Assistant, Fall 2023-present

13. Rushil Murikinati, Undergraduate Research Assistant, Fall 2023, CS&E

12. Nick Gable, Undergraduate Research Assistant, Summer 2022-Fall 2023, CS&E
    * Honor thesis: Exploring Graph Neural Networks for Real-Time Transit Arrival Prediction

11. Tora Husar, University Honors Program, ISyE

10. Erika Priester Undergraduate Research Assistant, Spring 2019, ISyE
9. Alexander Webb, Undergraduate Research Assistant, Summer 2018
8. Benjamin Tomhave, IOP Undergraduate Researcher, Summer 2018
7. Eugene Wong, IOP Undergraduate Researcher, Summer 2016-Spring 2018
6. Helena Casino Thomaz, IOP Undergraduate Researcher, Fall 2017
5. Tessa Nordman, Undergraduate Research Assistant, Spring 2017
4. Eric Elert, UROP Undergraduate Researcher, Spring 2017
3. Paul Mako, IOP Undergraduate Researcher, Fall 2016
2. Jacqueline Nowak, IOP Undergraduate Researcher, Spring-Summer 2016
1. John Soh, Undergraduate Research Assistant, Spring 2016, CS&E

Graduate Student Activities

Master's Thesis Directed

9. Sahas Sok, TBD, Fall 2024
8. Behnam Davazhad Emami, Towards an Efficient Electric Bus System: Multi-phase Optimization Model for Incremental Electrification of Bus Network with uncertain Energy Consumption, Fall 2023
7. Hannah DeBruin, GIS-Based Comprehensive Shared Micromobility Station Siting Optimization for Small Urban Areas, Summer 2023
6. Alexander Webb, Park-and-Ride Station Choice Behavior in a Multimodal Network with Overlapping Routes, Spring 2020
5. Benjamin Tomhave, Refined Choice Set Generation and the Investigation of Multi-criterion Transit Route Choice Behavior, Fall 2019
4. Pramesh Kumar, Transit Origin Destination Estimation using Automated Data, Spring 2019
3. Yufeng Zhang, An Algorithm for Reliable Shortest Path Problem with Travel Time Correlations, Spring 2019
2. Kristin Carlson, Accessibility Impacts of Bus Access to Managed Lanes, Summer 2017, * Co-advised with David Levinson
1. Benjamin Nault-Maurer, Transit Accessibility Improvements for Application in Transit Assignment Models, Spring 2017

Master's Thesis Committees Participated

2. Pratik Kotwal, CS&E, Spring 2020
1. Jack Olsson, CEGE, Fall 2018

Other Master's Students Advised

4. Kwangho Baek, Plan C with transisiotn to PhD, Fall 2023
3. Jacqueline Nowak, Plan B, Fall 2020
2. Yuxuan Gao, Plan C, Spring 2020
1. Yoon Joo (Joanne) Cho, Plan C, Spring 2019

Doctoral Students Advised

7. Nastaran Tork, Fall 2022 - Present
6. Kwangho Baek, Fall 2021 - Present
5. Ali Aalipour, Summer 2021 - Present
4. Behnam Emami, Spring 2020 - Present
3. Pramesh Kumar, Spring 2022
   * Dissertation Title: Modeling and Design of Integrated Transit Systems with Strategic Passenger Behavior
   * Current Position: Assistant Professor at Indian Institute of Technology-Delhi, India
2. Jhenyffer Oliveira, Fall 2021
   * Dissertation Title: A Heterogeneous Markov Chain Model to Predict Pavement Deterioration and Optimize Repair Activities
   * Current Position: Minnesota Department of Transportation
1. Yufeng Zhang, Summer 2021
   * Dissertation Title: On the Planning and Operations of the Integrated Transit and Mobility-as-a-Service Transportation System: An Equilibrium Analysis Approach
   * Current Position: Assistant Professor at Beijing Jiaotong University, China

Doctoral Dissertation Committees Participated

14. Nitin Varyani, CS&E, Fall 2023 * Thesis Proposal Exam
13. Tianyi Li, CEGE, Fall 2023 * Oral Preliminary Exam
12. Te Xu, CEGE, Fall 2023
11. Akshit Goyal, ISyE, Spring 2023 * Oral Preliminary Exam
10. Mingfeng Shang, CEGE, Summer 2022 * Oral Preliminary Exam

9. Shi'an Wang, CEGE, Fall 2021
8. Bingnan Lu, ISyE, Fall 2021
7. Rongsheng Chen, CEGE, Summer 2021
6. Xiaochen Zhang, ISyE, Fall 2020
5. Tao Tao, Urban and Regional Planning, Fall 2020 * Oral Preliminary Exam
4. Nitin Varyani, CS&E, Spring 2019 * Oral Preliminary Exam
3. Chelsey Palmateer, CEGE, Summer 2018
2. Mengying Cui, CEGE, Spring 2018
1. Jessica Schoner, CEGE, Summer 2017

Post-doctoral Fellows Supervised

1. Xinlina Yu, 4/2019 - 8/2020
   ***** Curren Position: Assistant Professor at Southeast University, China

Visiting Scholars Hosted

1. Kai Lu, 10/2017 - 9/2018
   ***** Current Position: Researcher, China

SERVICE AND PUBLIC ENGAGEMENT

Service To The Discipline/Profession/Interdisciplinary Area(s)

Journal Reviewer Experience

Annals of Operations Research

Computers, Environment and Urban Systems

Engineering Optimization

European Journal of Operational Research

IEEE Transaction on Intelligent Transportation Systems

International Journal of Transportation Science and Technology

Journal of Advanced Transportation

Journal of Intelligent Transportation Systems: Technology, Planning, and Operations

Journal of Transport and Land Use

Journal of Transport Geography

Journal of Transportation Engineering Part A: Systems, ASCE

Journal of Urban Planning and Development, ASCE

Networks

Networks and Spatial Economics

PLOS-ONE

Public Transport

Public Transportation

Transportation

Transportation Letters

Transportation Research Part A: Policy and Practice

Transportation Research Part B: Methodological

Transportation Research Part C: Emerging Technologies

Transportation Research Part D: Transport and Environment

Transportation Research Part E: Logistics and Transportation Review

Transportation Research Record

Transportation Science

Transportmetrica A: Transport Science

Urban Rail Transit

Committee memberships

Elected Chair, Intelligent Transportation Systems (ITS) special interest group of Transportation Science and Logistics (TSL), 2016-2019

Appointed Member, Standing Committee on Transportation Network Modeling AEP40, Transportation Research Board, 2018-present

Appointed Member, Standing Committee on Public Transportation Planning and Development AP025, Transportation Research Board, 2020-present

Appointed Member, Public Transport Committee, American Society of Civil Engineering, 2018-present

Member of Technical Advisory Panel, Regional Travel Forecasting, Metropolitan Council

Member of Technical Advisory Panel, Travel Behavior Inventory, Metropolitan Council

Member of Technical Advisory Panel, multiple research projects, Minnesota Department of Transportation

Review panels for external funding agencies

Proposal Review Panel Member, Cyber-Physical Systems (CPS) program, National Science Foundation

Organization of conferences, workshops, panels, symposia

As the committee chair, organized more than 30 conference sessions on Intelligent Transportation Systems for INFORMS Annual Meetings 2018 and 2019

Moderated a session on ”Route Choice Behavior and Resilient Networks” in Transportation Research Board Annual Meeting 2021

Moderated a session on ”Advances in Transportation Network Modeling” in Transportation Research Board Annual Meeting 2019

Service To The University/College/Department

University-wide service

Member of Education and Outreach council of Center for Transportation Studies, Spring 2016-Present

Faculty Fellow, Center for Transportation Studies, Fall 2015-Present

Member of Organizing Committee, 2019 CTS Research Conference, Center for Transportation Studies

Member of Organizing Committee, 2018 CTS Research Conference, Center for Transportation Studies

Member of Organizing Committee, 2017 CTS Research Conference, Center for Transportation Studies

Huber and Adams Transportation Scholarship Committee, Center for Transportation Studies, AY2017-2018

Huber and Adams Transportation Scholarship Committee, Center for Transportation Studies, AY2016-2017

Department service

Undergraduate Faculty Adviser, Fall 2015-Present

Faculty Adviser, Interdisciplinary Transportation Student Organization (ITSO), Fall 2015-present

Member of Planning Council, Fall 2022-Summer 2023

Member of Graduate Studies Committee, Fall 2015-Summer 2018, Fall 2021-Summer 2023

Member of Transportation Faculty Search Committee, AY2022-2023

Member of Faculty Search Committee, Industrial and Systems Engineering, AY2021-2022

Member of Transportation Faculty Search Committee, AY2017-2018

Member of Transportation Faculty Search Committee, AY2016-2017

Organizer of Transportation Group Seminar Series (CEGE 8200), Every Fall semester since 2016.