SUNDAY, JANUARY 13, 2019

**Sunday 09:00 AM - 12:00 PM**
Convention Center, Ballroom C

**Workshop 1001**
*From Transport Research to Innovation: Case Study-Based Presentation of U.S. and International Experiences*

International Activities, Research (about research)
Presenter: **Breton Johnson**, Director, Center for the Commercialization of Innovative Transportation Technology, Northwestern University, “Commercialization of research results at Northwestern University”

**Sunday 09:00 AM - 12:00 PM**
Convention Center, 140B

**Workshop 1014**
*Network Modeling in the Era of Automation Technologies, Big Data Analytics, and Advanced Computing: Identifying Challenges and Pathways to Future Breakthroughs*

Data and Information Technology, Operations and Traffic Management, Planning and Forecasting, Hot Topic: Transformational Technologies
Presenter: **Hani Mahmassani**, Northwestern University

**Sunday 01:30 PM - 05:30 PM**
Convention Center, 146B

**Workshop 1094**
*Doctoral Research in Transport Modeling*

Planning and Forecasting, Hot Topic: Transformational Technologies
Presenter: **Alec Biehl**, Northwestern University

MONDAY, JANUARY 14, 2019

**Monday 07:00 AM - 08:00 AM**
Marriott Marquis, Capitol Hill (M3)

**Policy and Organization Group Executive Board**
**Joseph Schofer**, Northwestern University, presiding

Data and Information Technology, Policy
**Monday 08:00 AM - 09:45 AM**
Convention Center, 146B  
**Event 1104**  
**The Role of Information Communication and Technology in Changing Travel Behaviors**  
Planning and Forecasting  
19-05883 - **Virtual Leisure Activity Engagement: The Role of Childhood Technology Experience**  
Lama BouMjahed, Mobility Lab  
**Hani Mahmassani**, Northwestern University

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**Monday 08:00 AM - 09:45 AM**
Convention Center, 147A  
**Event 1135**  
**Automation, Crowdsourcing, and Home Deliveries**  
Freight Transportation, Planning and Forecasting, Terminals and Facilities, Hot Topic: Transformational Technologies  
19-04917 - **Push and Pull Factors in Adopting a Crowdsourced Delivery System**  
**Aymeric Punel**, Northwestern University  
**Alireza Ermagun**, Northwestern University  
**Amanda Stathopoulos**, Northwestern University

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**Monday 10:15 AM - 12:00 PM**
Convention Center, 146B  
**Event 1174**  
**Automated Transportation and Shared Mobility**  
Planning and Forecasting, Hot Topic: Transformational Technologies  
19-00564 - **Paired-line hybrid transit system in a monocentric city with exponential demand pattern**  
**Sida Luo**, Northwestern University  
**Yu Nie**, Northwestern University  
19-05653 - **Impact of Autonomous Vehicles on Household Activity and Travel Scheduling: An Integrated Dynamic Network Modeling Approach**  
**Xiang Xu**, Northwestern University  
**Hani Mahmassani**, Northwestern University  
**Ying Chen**, Northwestern University  
19-02789 - **Joint Design of Multimodal Transit Networks and Shared Autonomous Mobility Fleets**  
**Helen Pinto**, Northwestern University  
**Michael Hyland**, Northwestern University  
**Hani Mahmassani**, Northwestern University  
Omer Verbas, Argonne National Laboratory

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**Monday 01:30 PM - 05:30 PM**
Marriott Marquis, Liberty J (M4)  
**Data for Decisions and Performance Measures Task Force**  
**Joseph Schofer**, Northwestern University, presiding  
Data and Information Technology, Operations and Traffic Management, Policy

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**Monday 03:45 PM - 05:30 PM**
Marriott Marquis, Independence H (M4)  
**Emerging Methods in Demand Forecasting Subcommittee, ADB40(1)**  
**Amanda Stathopoulos**, Northwestern University, presiding  
Data and Information Technology, Planning and Forecasting
Monday 03:45 PM - 05:30 PM
Convention Center, Hall A
Event 1370
**Freight Transportation Planning and Logistics Research**
Data and Information Technology, Freight Transportation, Planning and Forecasting
19-02663 - *Utilization Rate as a Resilience Index for Supply Chain Networks*
**Lama Al Hajj Hassan**, Northwestern University
**Ying Chen**, Northwestern University
**Hani Mahmassani**, Northwestern University

Monday 03:45 PM - 05:30 PM
Convention Center, Hall A
Event 1371
**Current Issues in Aviation**
Aviation, Energy
19-03231 - *Variations in Airline Passenger Expectation of Service Quality Across the Globe*
**Aymeric Punel**, Northwestern University
**Lama Al Hajj Hassan**, Northwestern University
Alireza Ermagun, Mississippi State University

Monday 06:00 PM - 07:30 PM
Convention Center, Hall A
Event 1298
**Artificial Intelligence and Machine Learning Methods for Transportation Applications, Part 1 (Part 2, Session 1299)**
Data and Information Technology, Hot Topic: Transformational Technologies
19-03098 - *Smart and Connected Community Detection Using Travelers Point of Interest*
**Ali Arian**, University of Arizona
**Alireza Ermagun**, Northwestern University
Yi-Chang Chiu, University of Arizona
19-05030 - *Correcting Mislabeled Taxi Trajectory Occupancy Status Using Input-Output Hidden Markov Model*
**Kenan Zhang**, Northwestern University
Lin Zhong, Sichuan University
**Yu Nie**, Northwestern University

Monday 06:00 PM - 07:30 PM
Convention Center, Hall A
Event 1299
**Artificial Intelligence and Machine Learning Methods for Transportation Applications, Part 2 (Part 1, Session 1298)**
Data and Information Technology, Hot Topic: Transformational Technologies
19-00575 - *“Hunting Image”: Taxi Search Strategies Recognition Using Sparse Subspace Clustering*
**Kenan Zhang**, Northwestern University
**Ying Chen**, Northwestern University
**Yu Nie**, Northwestern University
19-05306 - *Improving Forecasting Performance Using a Committee Approach: A Machine Learning Framework*
**Lama Al Hajj Hassan**, Northwestern University
**Hani Mahmassani**, Northwestern University
TUESDAY, JANUARY 15, 2019

Tuesday 08:00 AM - 09:45 AM
Convention Center, 145A
Event 1394
Traffic Equilibrium, Control, and Network Design
Planning and Forecasting
19-02434 - Complementarity Formulation and Solution Algorithm for Auto-Transit Assignment Problem
Amirali Zarrinmehr, Tarbiat Modares University
Hedayat Zockaei Aashtiani, Sharif University of Technology
Yu Nie, Northwestern University
Hossein Azizian, Sharif University of Technology

Tuesday 08:00 AM - 09:45 AM
Convention Center, 204C
Event 1410
Use of Technology and Data for Bridge Management
Bridges and Other Structures, Data and Information Technology, Maintenance and Preservation, Hot Topic: Transformational Technologies
19-05422 - A Comparative Study of Predictive Analysis Methods to Estimate Bridge Response
Fiorella Mete, Northwestern University
Ying Chen, Northwestern University
Amanda Stathopoulos, Northwestern University
David J. Corr, Northwestern University

Tuesday 08:00 AM - 09:45 AM
Convention Center, Hall A
Event 1436
Traffic Signal System with Connected Automated Vehicle Technology
Operations and Traffic Management, Hot Topic: Transformational Technologies
Archak Mittal, Ford Motor Company
Marija Ostojic, Northwestern University
Hani Mahmassani, Northwestern University

Tuesday 10:15 AM - 12:00 PM
Convention Center, 101
Event 1469
Connected Automated Vehicles: Modeling and Control
Hani Mahmassani, Northwestern University, presiding
Operations and Traffic Management, Hot Topic: Transformational Technologies

Tuesday 10:15 AM - 12:00 PM
Convention Center, Hall A
Innovations in Modeling and Assessing Sustainability in Transportation
Environment, Public Transportation, Society, Hot Topic: Resilience and Sustainability
19-03330 - Parallel Decision-Making Processes: A Bivariate Ordered Probit, Stage-of-Change Approach to Model the Adoption of Walking, Cycling, and Bike-sharing
Alec Biehl, Northwestern University
Maher Said, Northwestern University
Amanda Stathopoulos, Northwestern University

Tuesday 01:30 PM - 03:15 PM
Convention Center, 145A
Event 1515
Sustainable and Resilient Transportation Networks
Planning and Forecasting, Hot Topic: Resilience and Sustainability, Hot Topic: Transformational Technologies, Hot Topic: Transportation and Public Health
19-05738 - Reliability-Based User Equilibrium in Dynamic Stochastic Networks: A Scenario Approach Considering Travel Time Correlations and Heterogeneous Users
Ali Zockaie, Michigan State University
Hani Mahmassani, Northwestern University
Fatemeh Fakhrmoosavi, Michigan State University

Tuesday 01:30 PM - 03:15 PM
Convention Center, 140B
Event 1518
Accessibility for Policy and Practice
Policy, Planning and Forecasting, Society
19-04967 - Disparity of Access: Variations in Transit Service by Race, Ethnicity, Income, and Auto Availability
Elisa Borowski, Northwestern University
Alireza Ermagun, Mississippi State University
David Levinson, University of Sydney

Tuesday 03:45 PM - 05:30 PM
Convention Center, 147A
Event 1612
Emerging Modes for Last Mile Delivery in Dense Urban Areas
Freight Transportation, Planning and Forecasting, Vehicles and Equipment
19-03950 - Analyzing the Crowd-Shipping Delivery Performance from Bidding to Delivering
Alireza Ermagun, Northwestern University
Amanda Stathopoulos, Northwestern University

Tuesday 06:00 PM - 07:30 PM
Convention Center, Hall A
Event 1655
Vehicle Trajectory Data-Enabled Traffic Signal Control
Operations and Traffic Management
Marija Ostojic, Northwestern University
Archak Mittal, Ford Motor Company
Hani Mahmassani, Northwestern University
19-03365 - Trajectory Analytics: Application to Traffic Signal System Performance Assessment
Marija Ostojic, Northwestern University
Archak Mittal, Ford Motor Company
Hani Mahmassani, Northwestern University
David Hale, Leidos, Inc.

Tuesday 06:00 PM - 07:30 PM
Convention Center, Hall A
Event 1658
Traffic Flow Theory and Characteristics, Part 3 (Part 1, Session 1656; Part 2, Session 1657; Part 4, Session 1704; Part 5, Session 1753)
Operations and Traffic Management
19-05226 - Predictive Speed Harmonization in a Connected Environment: A Machine Learning Approach
Amr Elfar, Northwestern University
Alireza Talebpour, Texas A&M University
Hani Mahmassani, Northwestern University

Wednesday, January 16, 2019

Wednesday 08:00 AM - 09:45 AM
Convention Center, 144A
Event 1685
Corridors and Freight Performance Measurement
Freight Transportation, Planning and Forecasting, Terminals and Facilities
19-02337 - Freight Performance Measurement in FAST Act-Mandated State Freight Plans
Lama BouMjahed, Mobility Lab
Joseph Schofer, Northwestern University
19-05921 - A Reinforcement Learning Framework for Freight Demand Forecasting to Support Operational Planning Decisions
Lama Al Hajj Hassan, Northwestern University
Hani Mahmassani, Northwestern University
Ying Chen, Northwestern University

Wednesday 08:00 AM - 09:45 AM
Convention Center, Hall A
Event 1692
Logistics of Disaster Response, Business Continuity, and Humanitarian Aid
Security and Emergencies, Policy, Safety and Human Factors, Hot Topic: Resilience and Sustainability
19-05418 - On-Demand Rideshare for Emergency Relocation: An Exploratory Analysis of Context and Emotionality
Elisa Borowski, Northwestern University
Amanda Stathopoulos, Northwestern University

Wednesday 08:00 AM - 09:45 AM
Convention Center, Hall A
Event 1694
Car Ownership and Sharing
Planning and Forecasting, Hot Topic: Transformational Technologies
19-03557 - Why so certain? Analyzing certainty in the context of new ridesharing options
Jason Soria, Northwestern University  
Aymeric Punel, Northwestern University  
Eran Ben-Elia, Ben Gurion University of the Negev  
Yoram Shifman, Technion - Israel Institute of Technology  
Amanda Stathopoulos, Northwestern University

**Wednesday 08:00 AM - 09:45 AM**  
Convention Center, Hall A  
**Event 1698**  
**Active Modes and Travel Behaviors**  
Planning and Forecasting, Hot Topic: Transportation and Public Health  
19-01814 - Combining Continuum and Multi-Stage Psychological Frameworks through a MIMIC model: A Joint Exploration of Active Travel and Public Transit Usage  
**Alec Biehl**, Northwestern University  
**Amanda Stathopoulos**, Northwestern University

**Wednesday 08:00 AM - 09:45 AM**  
Convention Center, Hall A  
**Event 1699**  
**Self-Driving, Sharing, and On-Demand Adoption: Data and Models for a Transformative Mobility Roadmap**  
**Amanda Stathopoulos**, Northwestern University, presiding  
Planning and Forecasting, Hot Topic: Transformational Technologies  
19-04651 - Evaluating the Impact of Spatio-Temporal Demand Forecast Aggregation on the Operational Performance of Shared Autonomous Mobility Fleets  
**Florian Dandl**, Bundeswehr University, Munich  
**Michael Hyland**, Northwestern University  
**Klaus Bogenberger**, Bundeswehr University, Munich  
**Hani Mahmassani**, Northwestern University  
19-05378 - Privately Owned Autonomous Vehicle Optimization Model Development and Integration with ABM-DTA Framework  
**Xiang Xu**, Northwestern University  
**Hani Mahmassani**, Northwestern University  
**Ying Chen**, Northwestern University

**Wednesday 08:00 AM - 09:45 AM**  
Convention Center, Hall A  
**Event 1705**  
**Advanced Concepts for Intersections and Interchanges**  
Design, Operations and Traffic Management  
19-00468 - Intersection operation with nontraditional dynamic lane scheme through vehicle-to-signal connection  
**Sida Luo**, Northwestern University  
**Yu Nie**, Northwestern University  
**Lin Zhu**, Shandong University

**Wednesday 10:15 AM - 12:00 PM**  
Marriott Marquis, Marquis Ballroom Salon 10 (M2)  
**Policy and Organization Group and Data and Information Section Leaders Discussion**  
**Joseph Schofer**, Northwestern University, presiding  
Policy, Data and Information Technology
Wednesday 10:15 AM - 12:00 PM
Convention Center, Hall A
Event 1753
Traffic Flow Theory and Characteristics, Part 5 (Part 1, Session 1656; Part 2, Session 1657; Part 3, Session 1658; Part 4, Session 1704)
Operations and Traffic Management
19-06005 - Prediction and Mitigation of Flow Breakdown Occurrence for Weather Affected Networks: Case Study of Chicago, Illinois
Monika Filipovska, Northwestern University
Hani Mahmassani, Northwestern University
Archak Mittal, Ford Motor Company

Wednesday 02:30 PM - 04:00 PM
Convention Center, Hall A
Event 1774
Funding and Financing Surface Transportation: What Will the Future Bring
Administration and Management, Finance, Planning and Forecasting
19-02754 - Examining the Effectiveness of App-based Incentive Systems for Peak Spreading
Jason Soria, Northwestern University
Alireza Ermagun, Mississippi State University
Ali Arian, University of Arizona
Yi-Chang Chiu, University of Arizona

Wednesday 02:30 PM - 04:00 PM
Convention Center, Hall A
Event 1780
Transportation Network Modeling Mega Poster Session
Planning and Forecasting
19-01922 - Real-Time Traffic Flow Pattern Matching to Improve Predictive Performance of Online Simulation-Based Dynamic Traffic Assignment
Haleh Ale-Ahmad, Northwestern University
Hani Mahmassani, Northwestern University
Eunhye Kim, Northwestern University
Marija Ostojic, Northwestern University
19-02121 - Day-to-Day Learning Framework for Online Origin-Destination Demand Estimation and Network State Prediction
Eunhye Kim, Northwestern University
Hani Mahmassani, Northwestern University
Haleh Ale-Ahmad, Northwestern University
Marija Ostojic, Northwestern University