SUNDAY, JANUARY 12, 2020

NORTHWESTERN UNIVERSITY TRANSPORTATION CENTER

TRB RECEPTION & NUTC ALUMNI REUNION

MARRIOTT MARQUIS WASHINGTON, DC
901 Massachusetts Ave NW, Salon 1 & 2 (M2)

SUNDAY JAN. 12 2020
8:00 to 10:00 pm
transportation.northwestern.edu

MONDAY, JANUARY 13, 2020

7:00 AM - 8:00 AM
MONDAY
Marriott Marquis, Capitol Hill (M3)
Policy and Organization Group Executive Board
Joseph Schofer, Northwestern University, presiding
Data and Information Technology, Policy

1:30 PM - 3:15 PM
MONDAY
Marriott Marquis, Monument (M4)
Emerging Methods in Demand Forecasting Subcommittee, ADB40(1)
Amanda Stathopoulos, Northwestern University, presiding
1:30 PM - 3:15 PM
MONDAY
Convention Center, 146B
Lectern Session 1237
Automated Transportation and Shared Mobility
Planning and Forecasting
20-05562
Simulation Framework for Autonomous On-Demand Urban Air Mobility
Haleh Ale Ahmad, Northwestern University
Hani Mahmassani, Northwestern University
Michael Hyland, University of California, Irvine
20-05757
Dual-Horizon Forecasts and Repositioning Strategies for Operating Shared Autonomous Mobility Fleets
Florian Dandl, Universitat der Bundeswehr, Munchen
Michael Hyland, University of California, Irvine
Klaus Bogenberger, Bundeswehr University, Munich
Hani Mahmassani, Northwestern University

1:30 PM - 5:30 PM
MONDAY
Marriott Marquis, Liberty Salon J (M4)
Data for Decisions and Performance Measures Task Force
Joseph Schofer, Northwestern University, presiding
Data and Information Technology, Operations and Traffic Management, Policy

3:45 PM - 5:30 PM
MONDAY
Convention Center, 203
Lectern Session 1307
Impact of Weather on Traffic Speed and Volume
Maintenance and Preservation, Operations and Traffic Management
20-03092
Incorporating Weather Impacts on Traffic Demand for Real-time Traffic State Prediction
Eunhye Kim, Northwestern University
Hani Mahmassani, Northwestern University

3:45 PM - 5:30 PM
MONDAY
Convention Center, Hall A
Poster Session 1332
Information and Communications Technologies, Smartphones, Activity Patterns, and Travel Choices
20-01821 / A120
Social Media Effects on Sustainable Mobility Opinion Diffusion: Implications for Behavior Change
Elisa Borowski, Northwestern University
Ying Chen, Northwestern University
Hani Mahmassani, Northwestern University
20-04989 / A135
Experiments on Reputation Rating Systems for Online Mobility Services
Roger Chen, University of Hawai‘i at Manoa
Ying Chen, Northwestern University
Guocheng Jiang, Northwestern University
3:45 PM - 5:30 PM
MONDAY
Convention Center, Hall A
Poster Session 1345
Young Professional Research in Aviation
P20-20835 / A223
Travel Time Saving and Value of Time for Future Users of Urban Air Mobility through the Experience of Mobility Companies in Chicago
Haleh Ale Ahmad, Northwestern University

TUESDAY, JANUARY 14, 2020

8:00 AM - 9:45 AM
TUESDAY
Convention Center, Salon C
Lectern Session 1386
Preparing for Connected and Automated Vehicles: Results from EU - U.S. Research Collaboration
P20-21107
CAV Model Framework to Incorporate Transportation Supply and Demand Effects
Hani Mahmassani, Northwestern University

10:15 AM - 12:00 PM
TUESDAY
Convention Center, 102A
Lectern Session 1458
Macroscopic Traffic Flow Modeling and Control
Operations and Traffic Management
20-03736
Traffic Flow Breakdown Prediction Using Machine Learning Approaches
Monika Filipovska, Northwestern University
Hani Mahmassani, Northwestern University

10:15 AM - 12:00 PM
TUESDAY
Convention Center, Hall A
Poster Session 1494
Recent Applications of Connected and Automated Vehicles
Operations and Traffic Management
20-03920 / B320
Trajectory Planning for Connected and Automated Vehicles: Cruising and Platooning in Mixed Traffic
Xiangguo Liu, Northwestern University
Guangchen Zhao, University of Maryland
Neda Masoud, University of Michigan, Ann Arbor
Qi Zhu, Northwestern University
1:30 PM – 3:15 PM
TUESDAY
Convention Center, 140B
Lectern Session 1522
Big City, Turn on My Phone and Set Me Free: Exploring the Influences on and Influence of Ridesharing in Major Cities
Planning and Forecasting, Society, Transportation, General
20-04990
Ridesourcing Behavior Profiles: Application of K-Prototype Analysis on Large-scale data from Chicago, Illinois
Jason Soria, Northwestern University
Ying Chen, Northwestern University
Amanda Stathopulos, Northwestern University

3:45 PM - 5:30 PM
TUESDAY
Convention Center, Salon A
Lectern Session 1600
Performance Evaluation of Traffic Signal Systems Using Trajectory Data
Operations and Traffic Management
20-05438
Marija Ostojic, Northwestern University
Archak Mittal, Ford Motor Company
Hani Mahmassani, Northwestern University

3:45 PM - 5:30 PM
TUESDAY
Convention Center, Hall A
Poster Session 1643
Analyzing and Planning the Pedestrian Environment
Pedestrians and Bicyclists, Planning and Forecasting
20-03393
A Natural Experiment to Assess the Impacts of Street-Level Urban Design Interventions on Walkability and Business Activity
Maher Said, Northwestern University
Georges Geha, Massachusetts Institute of Technology (MIT)
Maya Abou-Zeid, American University of Beirut

6:00 PM - 7:30 PM
TUESDAY
Convention Center, 146A
Lectern Session 1644
Traffic Equilibrium and Dynamics
Planning and Forecasting
20-00385
Market Equilibrium and Pricing of E-Hail Services with Pooling
Kenan Zhang, Northwestern University
Marco Nie, Northwestern University
20-03106
Hyperpath-Based Algorithms for the Transit Equilibrium Assignment Problem
Zhandong Xu, Southwest Jiaotong University
Jun Xie, Southwest Jiaotong University
Marco Nie, Northwestern University
Xiaobo Liu, Southwest Jiaotong University
6:00 PM - 7:30 PM
TUESDAY
Convention Center, Hall A
Poster Session 1654
Traffic Flow Theory and Characteristics, Part 1 (Part 2, Session 1655; Part 3, Session 1656; Part 4, Session 1760; Part 5, Session 1761)
Operations and Traffic Management
20-00823 / B317
Predictive Speed Harmonization in Traffic Flow with Connected and Automated Vehicles: Machine Learning Application
Amr Elfar, Northwestern University
Alireza Talebpour, University of Illinois, Urbana Champaign
Hani Mahmassani, Northwestern University

6:00 PM - 7:30 PM
TUESDAY
Convention Center, Hall A
Poster Session 1655
Traffic Flow Theory and Characteristics, Part 2 (Part 1, Session 1654; Part 3, Session 1656; Part 4, Session 1760; Part 5, Session 1761)
Operations and Traffic Management
20-04568 / B331
Travel Time Variability and Congestion Assessment Through the Experience of Mobility Companies: Network Relations and Origin-Destination Clusters
Haleh Ale Ahmad, Northwestern University
Ying Chen, Northwestern University
Hani Mahmassani, Northwestern University

10:15 AM - 12:00 PM
WEDNESDAY
Convention Center, Salon B
Lectern Session 1717
Novel Methods in Simulation
Operations and Traffic Management
20-02471
A Calibration Framework for Simulation Tools to Manage Uncertain Future Conditions
Moein Hosseini, Northwestern University
Hani Mahmassani, Northwestern University
David Hale, Leidos, Inc.
10:15 AM - 12:00 PM
WEDNESDAY
Convention Center, Hall A
Poster Session 1728
Transportation Modeling Network Mega and Joint Poster Session with Traveler Behavior and Values
Planning and Forecasting
20-04455 / A117
An Efficient Algorithm for The Traffic Assignment Problem with Side Constraints
Liyang Feng, Southwest Jiaotong University
Jun Xie, Southwest Jiaotong University
Marco Nie, Northwestern University
Xiaobo Liu, Southwest Jiaotong University
20-04763 / A138
Reliable Least-Time Path Estimation and Computation in Stochastic Time-Varying Networks with Spatio-Temporal Dependencies
Monika Filipovska, Northwestern University
Hani Mahmassani, Northwestern University

2:30 PM - 4:00 PM
WEDNESDAY
Section Leaders Discussion
Joseph Schofer, Northwestern University, presiding
Policy, Data and Information Technology

2:30 PM - 4:00 PM
WEDNESDAY
Convention Center, 151B
Lectern Session 1742
Improving Traffic State Analysis and Prediction with Machine Learning
Data and Information Technology
20-04202
Situation-Aware Multi-step Traffic Speed Prediction: No-Regret Learning Approach
Eunhye Kim, Northwestern University
Hani Mahmassani, Northwestern University

2:30 PM - 4:00 PM
WEDNESDAY
Convention Center, 143B
Lectern Session 1755
Measuring Performance Across Transportation Modes: Similarities, Differences, and Synergies
Administration and Management, Operations and Traffic Management, Spotlight Theme: A Century of Progress: Foundation for the Future
P20-20122
Stretching performance measures beyond big data – some lessons from the Special Task Force on Data for Decisions and Performance Measures
Joseph Schofer, Northwestern University