SUNDAY, JANUARY 8, 2017

Emerging Needs for Improving Simulation Models in the Immediate, Intermediate, and Long-Term Horizons

Workshop 134

Sunday 9:00 AM - 12:00 PM
Convention Center, 103A

Network Level Modeling and Applications of CAV Technologies with Focus on the Level 2 (Long Term Needs) Automation
Hani Mahmassani, Northwestern University

From Ad Hoc to Organized: Writing the Road Map for Improving Travel Analysis Methods

Workshop 162

Sunday 1:30 PM – 4:30 PM
Convention Center, 145A

Workshop | AICP Certification

Hani Mahmassani, Northwestern University, participant
David Ory, Metropolitan Transportation Commission (MTC), presiding
Elizabeth Sall, UrbanLabs LLC, presiding
Gregory Erhardt, University of Kentucky, presiding
William Charlton, Because LLC, presiding
Joan Walker, University of California, Berkeley, presiding
Brian Gardner, Federal Highway Administration (FHWA), presiding
MONDAY, JANUARY 9, 2017

11th University Transportation Center Spotlight Conference: Rebuilding and Retrofitting the Transportation Infrastructure

Monday 7:00 AM - 8:00 AM
Marriott Marquis, Gallery Place (M3)
*By Invitation*

Joseph Schofer, Northwestern University, presiding

Social Media and Travel: Explorations Using New Data and Methods

Event 212

Monday 8:00 AM - 9:45 AM
Convention Center, 146B
*Lectern | AICP Certification*

Exploring the Role of Social Media Platforms in Informing Trip Planning: The Case of Yelp.com
Lama Bou Mjahed, Northwestern University
Archak Mittal, Northwestern University
Amr Elfar, Northwestern University
Hani Mahmassani, Northwestern University
Ying Chen, Northwestern University

Space, Friendship, and Virtual Social Networks: Properties of Location-Based Social Networks and Travelers' Destination Choice
Ying Chen, Northwestern University
Hani Mahmassani, Northwestern University
Fei Zhao, Northwestern University

Freeway Operations

Event 235

Monday 8:00 AM - 9:45 AM
Convention Center, Hall E
*Poster | Practice Ready Paper*

Twitter or Chatter? Involving Social Media Data Analysis in Traffic Incident Management
Ying Chen, Northwestern University
Archak Mittal, Northwestern University
Hani Mahmassani, Northwestern University
Traffic Flow Modeling of Connected and Automated Transportation Systems

Event 237

Monday 8:00 AM - 9:45 AM
Convention Center, 101
Lectern
Hani Mahmassani, Northwestern University, presiding

Current Research in Freight Economics and Regulation

Event 259

Monday 8:00 AM - 9:45 AM
Convention Center, Hall E
Poster | Practice Ready Paper

Examining Drivers of Rail Transport Rates over Time: Econometric Analysis
Michael Hyland, Northwestern University
Lama Bou Mjahed, Northwestern University
Hani Mahmassani, Northwestern University

Data for Decisions and Performance Measures Task Force

Monday 8:00 AM - 12:00 PM
Marriott Marquis, Liberty N (M4)
Joseph Schofer, Northwestern University, presiding

Dynamics of Activity Scheduling

Event 292

Monday 10:15 AM - 12:00 PM
Convention Center, 145A
Lectern

Schedule Consistency for Daily Activity Chains in Integrated Activity-Based Dynamic Multimodal Network Assignment
Xiang Xu, Northwestern University
Ali Zockaie, Michigan State University
Hani Mahmassani, Northwestern University
Hooram Halat, Northwestern University
Omer Verbas, Argonne National Laboratory
Michael Hyland, Northwestern University
Peter Vovsha, WSP|Parsons Brinckerhoff
James Hicks, WSP|Parsons Brinckerhoff
Activity Cancellation and Rescheduling by Stressed Households to Improve Convergence in Integrated ABM-DTA Models  
Hooram Halat, Northwestern University  
Hani Mahmassani, Northwestern University  
Ali Zockaie, Michigan State University  
Peter Vovsha, WSP|Parsons Brinckerhoff

Development of Freight Fluidity Performance Measures Task Force

Monday 1:30 PM - 3:15 PM  
Marriott Marquis, Pentagon (M4)  
Joseph Schofer, Northwestern University, presiding

Innovations in Urban Transportation Data

Event 357

Monday 1:30 PM - 3:15 PM  
Convention Center, Hall E  
Poster | Practice Ready Paper

Inferring Taxi Passenger Waiting Time from Taxi GPS Traces  
Hongyu Chen, Northwestern University  
Yu Nie, Northwestern University

Past, Present and Future of Nanotechnology in Cement and Concrete

Event 382

Monday 1:30 PM - 3:15 PM  
Convention Center, 202B  
Lectern

Nanoengineering and Nanoscience of Concrete  
Surendra Shah, Northwestern University

Urban Transit and Service Network Design

Event 426

Monday 3:45 PM - 5:30 PM  
Convention Center, 146B  
Lectern

Demand-Adaptive Paired-Line Hybrid Transit System with Radial Route Structure  
Yu Nie, Northwestern University  
Peng Chen, Northwestern University
Dynamic Predictive Strategies for Urban Snowplow Routing
Xiang Xu, Northwestern University
Hani Mahmassani, Northwestern University
Zihan Hong, Northwestern University
Roemer Alfelor, Federal Highway Administration (FHWA)

TUESDAY, JANUARY 10, 2017

Lessons from the History of Statistics in U.S. Department of Transportation for a Future of Soundbites, Infographics, and Performance Measurement

Event 496
Tuesday 8:00 AM - 9:45 AM
Convention Center, 152B
Lectern

Panel Presentation
Joseph Schofer, Northwestern University

Route Choice Behavior

Event 506
Tuesday 8:00 AM - 9:45 AM
Convention Center, Hall E
Poster

Testing the Proportionality Assumption with Taxi Trajectory
Jun Xie, Shanghai Jiao Tong University
Yu Nie, Northwestern University
Xiaobo Liu, Southwest Jiaotong University

Surveillance and Control of Sustainable and Resilient Transportation Networks

Event 511
Tuesday 8:00 AM - 9:45 AM
Convention Center, 145A
Lectern

Dynamic Equilibrium-Free Model for Monitoring Signalized Urban Networks Based on Discrete-Time Optimal Control Formulation
Loukas Dimitriou, University of Cyprus
Athanasios Ziliaskopoulos, Northwestern University
Characterization of Trip-Level Pace Variability Based on Taxi GPS Trajectory Data
He Ma, Tsinghua University
Huapu Lu, Tsinghua University
Amanda Stathopoulos, Northwestern University
Yu Nie, Northwestern University

Effectiveness of Predictive Weather-Related ATDM Strategies for Network Management Perspective
Zihan Hong, Northwestern University
Hani Mahmassani, Northwestern University
Xiang Xu, Northwestern University
Archak Mittal, Northwestern University
Ying Chen, Northwestern University
Hooram Halat, Northwestern University
Roemer Alfelor, Federal Highway Administration (FHWA)

Interrupted Flow
Event 531
Tuesday 8:00 AM - 9:45 AM
Convention Center, Hall E
Poster

Dynamic Lane Grouping Analytical Methods for Signalized Intersections
David Hale, Leidos, Inc.
Hani Mahmassani, Northwestern University
Alexander Paz, University of Nevada, Las Vegas
Ana Moreno, Technical University of Munich
Seckin Ozkul, University of South Florida
Zhitong Huang, Leidos, Inc.

Traffic Flow Theory and Characteristics, Part 1
(Part 2, Session 731, Part 3, Session 798, Part 4, Session 848)
Event 532
Tuesday 8:00 AM - 9:45 AM
Convention Center, Hall E
Poster

Network Flow Relations and Travel Time Reliability in a Connected Environment
Archak Mittal, Northwestern University
Hani Mahmassani, Northwestern University
Alireza Talebpour, Texas A&M University
Current Issues in Transportation Energy

Event 563

Tuesday 10:15 AM - 12:00 PM
Convention Center, Hall E
Poster | Practice Ready Paper

Mileage Efficiency-Based Approach to Quantify Energy Consumption and Carbon Emissions of Automotive Vehicles
Neelesh Patankar, Northwestern University
Jane Lin, University of Illinois, Chicago
Tanvee Patankar, Adlai E. Stevenson High School

Evaluating the Performance of Traffic Signal Systems

Event 579

Tuesday 10:15 AM - 12:00 PM
Convention Center, Hall E
Poster | Practice Ready Paper

Assessment of Signal Timing Plan Robustness in an Arterial Corridor Through Seasonal Variation of Traffic Flows
Marija Ostojic, Northwestern University
Aleksandar Stevanovic, Florida Atlantic University
Dusan Jolovic, New Mexico State University
Hani Mahmassani, Northwestern University

Artificial Intelligence Methods and Modeling Tools for Classification, Estimation, Prediction, Recognition, and Detection in Transportation Applications

Event 617

Tuesday 1:30 PM - 3:15 PM
Convention Center, Hall E
Poster

Semisupervised Learning for Discrete Choice Models
Jie Yang, Northwestern University
Sergey Shebalov, Sabre Airline Solutions
Diego Klabjan, Northwestern University

Community Impact Assessment

Event 628

Tuesday 1:30 PM - 3:15 PM
Convention Center, Hall E
Poster
Exploring Active Transport Needs in a Chicago Neighborhood Using Focus Groups
Alec Biehl, Northwestern University
Amanda Stathopoulos, Northwestern University

Optimization and Scheduling of Mainline and Station Operations for Passenger Rail Systems

Event 676

Tuesday 1:30 PM - 3:15 PM
Convention Center, 143C
Lectern | Practice Ready Paper

New Optimization Model for Train Platforming and Routing Problem
Gongyuan Lu, Southwest Jiaotong University
Xiaobo Liu, Southwest Jiaotong University
Yu Nie, Northwestern University

Current Young Professionals' Research in Aviation

Event 679

Tuesday 1:30 PM - 3:15 PM
Convention Center, Hall E
Poster

In-Flight Services Proposed by U.S.-Based Air Carriers: Current Situation and Their Influence on Passenger’s Choice Behavior
Aymeric Punel, Northwestern University

Smart Accessibility for Smart Cities

Event 609

Tuesday 3:45 PM - 5:30 PM
Convention Center, 152A
Lectern
Joseph Schofer, Northwestern University, presiding

Law Enforcement and Traffic Safety: Evaluation of Countermeasures, Automated Enforcement, and Geospatial Data

Event 742

Tuesday 3:45 PM - 5:30 PM
Convention Center, Hall E
Poster
Amr Elfar, Northwestern University
Hani Mahmassani, Northwestern University
Archak Mittal, Northwestern University
Marija Ostojic, Northwestern University
Omer Verbas, Argonne National Laboratory
Joseph Schofer, Northwestern University

Current Research in Freight Planning and Logistics

Event 754

Tuesday 3:45 PM - 5:30 PM
Convention Center, Hall E
Poster | Practice Ready Paper

Crowdsourced Urban Package Delivery: Modeling Traveler Willingness to Work as Crowdshippers
John Miller, Northwestern University
Yu Nie, Northwestern University

Emerging Methods Subcommittee, ADB40(1)

Tuesday 6:00 PM - 7:30 PM
Marriott Marquis, Monument (M4)

Aruna Sivakumar, Imperial College London, presiding
Amanda Stathopoulos, Northwestern University, presiding

Traffic Modeling and Traffic Control

Event 767

Tuesday 6:00 PM - 7:30 PM
Convention Center, 101
Lectern

Investigating the Effects of Reserved Lanes for Autonomous Vehicles on Congestion and Travel Time Reliability
Alireza Talebpour, Texas A&M University
Hani Mahmassani, Northwestern University
Amr Elfar, Northwestern University
WEDNESDAY, JANUARY 11, 2017

Transportation Planning Applications
Event 780

Wednesday 8:00 AM - 9:45 AM
Convention Center, Hall E
Poster | Practice Ready Paper

Taxonomy of Shared Autonomous Vehicle Fleet Management Problems to Inform Future Transportation Mobility
Michael Hyland, Northwestern University
Hani Mahmassani, Northwestern University

Highway Safety Performance
Event 802

Wednesday 8:00 AM - 9:45 AM
Convention Center, Hall E
Poster | Practice Ready Paper

Modeling the Safety Effects of Red-Light Camera Enforcement with Spillover Effects
Omer Verbas, Argonne National Laboratory
Hani Mahmassani, Northwestern University
Amr Elfar, Northwestern University
Archak Mittal, Northwestern University
Marija Ostojic, Northwestern University

Transportation Network Modeling
Event 827

Wednesday 10:15 AM - 12:00 PM
Convention Center, Hall E
Poster | Practice Ready Paper

Demand-Adaptive Paired-Line Hybrid Transit System with Radial Route Structure
Peng Chen, Northwestern University
Yu Nie, Northwestern University

Dynamic Predictive Strategies for Urban Snowplow Routing
Xiang Xu, Northwestern University
Hani Mahmassani, Northwestern University
Zihan Hong, Northwestern University
Roemer Alfelor, Federal Highway Administration (FHWA)
Effectiveness of Predictive Weather-Related ATDM Strategies for Network Management Perspective
Zihan Hong, Northwestern University
Hani Mahmassani, Northwestern University
Xiang Xu, Northwestern University
Archak Mittal, Northwestern University
Ying Chen, Northwestern University
Hooram Halat, Northwestern University
Roemer Alfelor, Federal Highway Administration (FHWA)

Characterization of Trip-Level Pace Variability Based on Taxi GPS Trajectory Data
He Ma, Tsinghua University
Huapu Lu, Tsinghua University
Amanda Stathopoulos, Northwestern University
Yu Nie, Northwestern University

Dynamic Equilibrium-Free Model for Monitoring Signalized Urban Networks Based on Discrete-Time Optimal Control Formulation
Loukas Dimitriou, University of Cyprus
Athanasios Ziliaskopoulos, Northwestern University

Travel Behavior and Route Choice

Event 828

Wednesday 10:15 AM - 12:00 PM
Convention Center, Hall E
Poster | AICP Certification

Activity Scheduling and Travel Choices in a Dynamic Network: Equilibrium Concept and Properties of ABM-DTA Integrated Model Framework
Hooram Halat, Northwestern University
Hani Mahmassani, Northwestern University
Ali Zockaie, Michigan State University

New Algorithm for Most Likely Path Flow Solution in Traffic Assignment
Jun Xie, Shanghai Jiao Tong University
Yu Nie, Northwestern University

Heuristic Approach to Estimate Travel Costs on Least Generalized Cost Paths for Heterogeneous Users in Integrated ABM-DTA on Large-Scale Networks
Xiang Xu, Northwestern University
Fatemeh Fakhrooosavi, Michigan State University
Hani Mahmassani, Northwestern University
Ali Zockaie, Michigan State University

Transportation Demand Forecasting Poster Mega-session, Part 1 (Part 2, Session 830)

Event 829

Wednesday 10:15 AM - 12:00 PM
Convention Center, Hall E
Poster | Practice Ready Paper
Exploratory Analysis of Crowdsourced Delivery Service Through a Stated Preference Experiment
Aymeric Punel, Northwestern University
Amanda Stathopoulos, Northwestern University

Transforming Approaches to Address Transformative Mobility

Event 868

Wednesday 2:30 PM - 4:00 PM
Convention Center, 145A
Lectern | AICP Certification | Practice Ready Paper
Amanda Stathopoulos, Northwestern University, presiding

THURSDAY, JANUARY 12, 2017

Active Transportation Operation and Demand Management in Connected and Automated Traffic Systems: Data Collection and Analytics, Modeling, and Control

Workshop 898

Thursday 8:00 AM - 12:00 PM
Convention Center, 101
Workshop

Network Flow Modeling, Simulation, Calibration and Validation in the Era of ATDM and CAV Technologies
Hani Mahmassani, Northwestern University