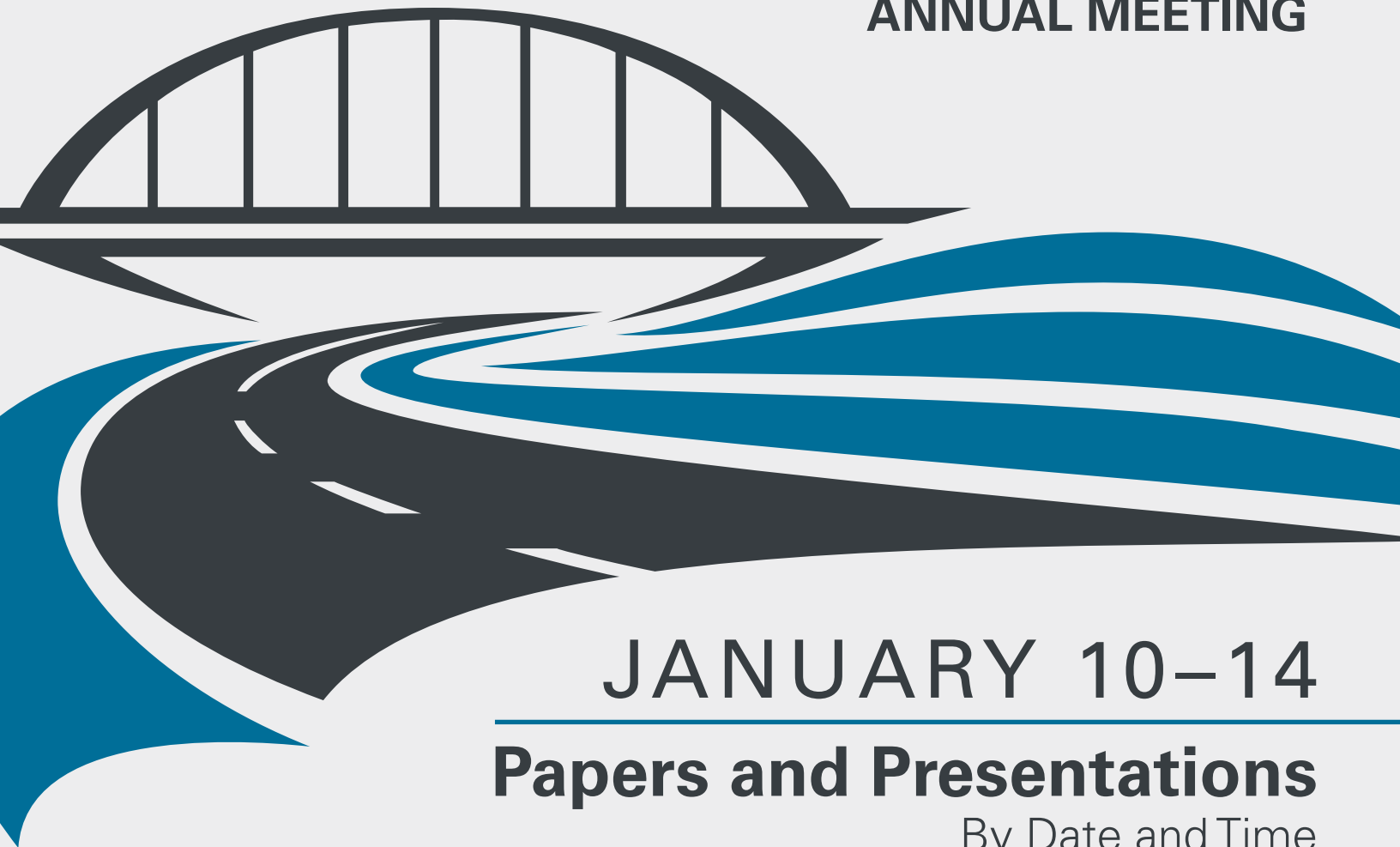


UNIVERSITY TRANSPORTATION RESEARCH CENTER

UTRC at 2016 TRB ANNUAL MEETING



JANUARY 10-14

Papers and Presentations

By Date and Time

Transportation Research Board 95th Annual Meeting

JANUARY 10-14, 2016 • WASHINGTON D.C.



THIS DOCUMENT ASSEMBLES THE SESSIONS IN WHICH UTRC FACULTY AND STAFF WILL BE PRESENTING AT THE TRANSPORTATION RESEARCH BOARD (TRB) 95TH ANNUAL MEETING.

**THE MEMBER INSTITUTIONS OF THE UNIVERSITY
TRANSPORTATION RESEARCH CENTER ARE:**

City University of New York

Clarkson University

Columbia University

Cornell University

Hofstra University

Manhattan College

New Jersey Institute of Technology

New York Institute of Technology

New York University

Rochester Institute of Technology

Rowan University

Rensselaer Polytechnic Institute

State University of New York

Stevens Institute of Technology

Syracuse University

The College of New Jersey

University of Puerto Rico



Session 111

Resilience: Now That TRB Has a New Section, What's the New Direction?, Workshop

/ Sunday, January 10, 2016
9:00AM - 12:00PM

/ Convention Center, 150B

Event Description:

In the past year, resilience has been incorporated into a number of transportation actions. These actions include the 2014 FHWA Order Transportation System Preparedness and Resilience to Climate Change, the newly created TRB Transportation Systems Resilience section and the TRB Executive Board's decision to make resilience one of its key topics for the next three years. With 2015 as the foundation year, three panels will discuss what we can expect as the resilience discussion unfolds.

Presiding Officer(s):

John Contestabile, Johns Hopkins University, presiding

Sponsored By:

Standing Committee on Critical Transportation Infrastructure Protection (ABR10)

Presentation(s):

Panel 1: Resilience from the Perspective of the Critical Transportation Infrastructure Protection Committee

P16-1305:

/ **Silvana Croope**, Delaware Department of Transportation

/ **Gouranga Banik**, Oklahoma State University

P16-1332:

/ **Michael Dinning**, Office of the Assistant Secretary for Research and Technology (OST-R)

/ **Rae Zimmerman**, New York University (NYU)

/ **Maria Burns**, University of Houston

Panel 2: Physical Security: Why It's Critical to Resilience

/ **Rae Zimmerman**, New York University (NYU) P16-1153 (organizer, moderator, and speaker)

Physical Security: New Emerging Needs and Innovations

/ **Rae Zimmerman**, New York University (NYU) P16-2196

Transportation Resilience to Physical Threats: Challenges from Natural and Man-Made Threats

/ **Pamela Murray-Tuite**, Virginia Polytechnic Institute and State University P16-2197

/ **Kevin Heaslip**, Virginia Polytechnic Institute and State University

The Role of Infrastructure Interdependencies in Physical Security

/ **Duane Verner**, Argonne National Laboratory P16-2198

Incorporating Proof Testing For Blast Loadings In Major Projects

/ **Vince Chiarito**, US Army Corps of Engineers P16-2169

Comparative Analysis Reports on TSA Terrorist Threat Vulnerability Assessments of Bridges and Tunnels

/ **Gregory Jizba**, U.S. Army Corps of Engineers (USACE) P16-2203

Session 142

SHRP 2 C20, Part 1: Innovations in Local Freight Data Implementation Projects— Progress and Outcome, **Workshop**

Sunday, January 10, 2016
9:00AM - 12:00PM

Convention Center, 147A

Event Description:

This Session features interactive discussions of the SHRP 2 Report S2-C20-RR-1, Freight Demand Modeling and Data Improvement(C20) focusing on recently completed innovations in local freight data pilot projects. Topics include commercial waybill data sources, public– private data fusion at metropolitan planning organization geographic levels, understanding the flow of goods movement with the latest technologies for automated vehicle recognition, and agricultural industry transportation demand projects.

Presiding Officer(s):

Vidyadhara Mysore, Federal Highway Administration (FHWA)

Sponsored By:

Standing Committee on Freight Transportation Planning and Logistics (AT015)
Standing Committee on Freight Transportation Data (ABJ90)

Presentation(s):

IAP Project Report Out - Capital District Transportation Committee
/ **Xiaokun Wang**, Rensselaer Polytechnic Institute (RPI)

Urban Streets Subcommittee, **AHB40(3.3)**

Sunday, January 10, 2016
1:30PM - 2:45PM

Marriott Marquis, Liberty J (M4)

Presiding Officer(s):

Janice R. Daniel, New Jersey Institute of Technology, presiding

Sponsored By:

Standing Committee on Highway Capacity and Quality of Service (AHB40)
Subcommittee on Urban Streets (AHB40(3.3))

Session 160

Sensing Technologies for Transportation Applications, **Workshop**

Sunday, January 10, 2016
1:30 PM- 4:30 PM

Convention Center, 159

Event Description:

Whether you're a first-time attendee, or a long-time veteran of the TRB Annual Meeting, you are invited to come and learn how to make the most of your time at the meeting. Offered are a brief overview of TRB, tips on navigating the meeting and on networking during the meeting, the role TRB can play in career development, and how to become involved in TRB activities. Refreshments are provided along with an opportunity for attendees to meet each other and TRB leaders.

Presiding Officer(s):

Colin Brooks, Michigan Technological University

Sponsored By:

Standing Committee on Information Systems and Technology (ABJ50)
Standing Committee on Geographic Information Science and Applications (ABJ60)

Presentation(s):

Optimal Access Restoration in Post-Disaster Environments: An Innovative Use of Remote Sensing and Optimization Techniques
/ **Jose Holguin-Veras**, Rensselaer Polytechnic Institute (RPI)

Session 185

Transformative Trends in Transit Data: General Transit Feed Specifications Bonanza, Workshop

Sunday, January 10, 2016
1:30 PM- 4:30 PM

Convention Center, 144A

Event Description:

This open source – open data (OS – OD) transit Session will introduce the use of OS software and a key new OD resource: GTFS. Participants will learn about the creation, use, and application of OS – OD with hands-on experience and participate in demonstrations of exciting new uses for transit, including instructions for gaining access to tools and techniques for their own future use.

Presiding Officer(s):

Catherine Lawson, State University of New York, Albany

Sponsored By:

Technical Activities (A0000)

Presentation(s):

GTFS in Action

- / **Jackie Klopp**, Columbia University
- / **Sarah Williams**, Massachusetts Institute of Technology
- / **Catherine Lawson**, State University of New York, Albany
- / **Drew Dara-Abrams**, Mapzen

Session 189

On-Demand Economy and the Urban Environment: The Urban Freight Story, Workshop

Sunday, January 10, 2016
1:30 PM- 4:30 PM

Convention Center, 144C

Event Description:

The recent advancement of digital technology has enabled the emergence of an on-demand economy, embracing a business model that capitalizes on a surplus of drivers, rooms, or warehousing space by putting the surplus to work for the benefits of workers, consumers, and surrounding communities. This Session will focus on ways that the on-demand economy is being used for urban freight shipments, warehousing, and grocery shopping, as well as the effects of the on-demand economy on urban design.

Presiding Officer(s)

Akiko Yamagami, Southern California Association of Governments
Peter Plumeau, RSG

Sponsored By:

Standing Committee on Urban Freight Transportation (AT025)
Standing Committee on Freight Transportation Economics and Regulation (AT010)

Presentation(s):

Urban Design and Changing Needs

- / **Xiaokun Wang**, Rensselaer Polytechnic Institute (RPI)

Young Professionals Reception

Sunday, January 13, 2013
9:00 PM- 10:30 PM

Convention Center, Ballroom
South Pre-Function C

Event Description:

Co-hosted by the TRB Young Members Council and Young Professionals in Transportation, this reception celebrates all young professionals, students, and their supporters by providing opportunities for career development and networking with peers from around the world. Light refreshments will be served.

Presiding Officers:

Alison Conway, City College of New York

Sponsored By:

Young Members Council (YMC) (A0040T)

Presentations:

Opportunities for Young Participants

- / **Alison J. Conway**, City College of New York

Pedestrian and Bicycle University Education Joint Subcommittee of ANF20, ANF10

/ Monday, January 11, 2016
8:00 AM- 9:45 AM

/ Marriott Marquis,
Marquis Ballroom Salon 7 (M2)

Presiding Officers:

Daniel Hess, University at Buffalo

Sponsored By:

Standing Committee on Bicycle Transportation (ANF20)
Subcommittee on Pedestrian and Bicycle University Education (ANF20(6))

Session 198

Automated and Shared Vehicles: Market Penetration and Pricing, Lectern

/ Monday, January 11, 2016
8:00 AM- 9:45 AM

/ Convention Center, 150B

Event Description:

This session explores some of the economic issues surrounding shared and automated vehicles. Can history provide any insight into the market penetration rate for automated vehicles? pricing of shared rides versus traditional taxis? public opinions of the new mobility options?

Presiding Officer(s):

Sabyasachee Mishra, University of Memphis

Sponsored By:

Standing Committee on Transportation Economics (ABE20)

Presentation(s):

Pricing Strategies for an E-hailing Platform in Taxi Service

- / **Xiaolei Wang**, Shanghai Jiao Tong University
- / **Fang He**, University of Florida
- / **Huaizhu Gao**, Cornell University

Session 204

Smartphones, Realtime Information, and Travel Behavior, Lectern

/ Monday, January 11, 2016
8:00 AM- 9:45 AM

/ Convention Center, 156

Event Description:

Smart phones are being increasingly used to provide travel information and to collect data in real time. This session features five papers which discuss applications of this smart technology for various travel applications and its impact on sustainable mobility.

Presiding Officer(s):

Roger Chen, Rochester Institute of Technology (RIT)

Sponsored By:

Standing Committee on Effects of Information and Communication Technologies (ICT) on Travel Choices (ADB20)

Session 205

Transportation Network Logistics, Lectern

/ Monday, January 11, 2016
8:00 AM- 9:45 AM

/ Convention Center, 146B

Presiding Officer(s):

Joseph Chow, New York University (NYU)

Sponsored By:

Standing Committee on Transportation Network Modeling (ADB30)

Presentation(s):

Implications of Cost Equity Consideration in Hazmat Network Design

- / **Longsheng Sun**, University at Buffalo
- / **Mark Karwan**, University at Buffalo
- / **Changhyun Kwon**, University of South Florida

Session 206

World's Next Top (Choice) Model, Lectern / Monday, January 11, 2016 / Convention Center, 143B
8:00 AM- 9:45 AM

Presiding Officer(s):

Ricardo Daziano, Cornell University

Sponsored By:

Standing Committee on Transportation Demand Forecasting (ADB40)

Presentation(s):

Simulation Evaluation of Emerging Estimation Techniques for Mixed Multinomial Probit Models

- / **Elisabetta Cherchi**, Technical University of Denmark
- / **Subodh Dubey**, University of Texas, Austin
- / **Ricardo Daziano**, Cornell University
- / **Abdul Pinjari**, University of South Florida
- / **Chandra Bhat**, University of Texas, Austin

Discrete Choice with Interdependencies: Spatial Binary Probit Model with Endogenous Weight Matrix

- / **Yiwei Zhou**, Precision Systems, Inc.
- / **Xiaokun Wang**, Rensselaer Polytechnic Institute (RPI)

Session 219

Field Measurements and Analyses of Modulus and Moisture of Pavement Sub-grade and Unbound Layers, Lectern / Monday, January 11, 2016 / Convention Center, 209A
8:00 AM- 9:45 AM

Presiding Officer(s):

Alessandra Bianchini, U.S. Air Force Civil Engineer Center (USAFCEC)

Sponsored By:

Standing Committee on Geotechnical Instrumentation and Modeling (AFS20)

Presentation(s):

Developing Statistical Limits for Using the Lightweight Deflectometer in Construction Quality Assurance (16-4668)

- / **Matthew Volovski**
- / **Samuel Labi**, Purdue University
- / **Kurt Sommer**, Indiana Department of Transportation
- / **Ahmed Noureldin**, Indiana Department of Transportation
- / **Ronald Walker**, Indiana Department of Transportation

Session 244

Advancement in the Construction Management of Transportation Facilities, Poster / Monday, January 11, 2016 / Convention Center, Hall E
8:30 AM- 10:15 AM

Event Description:

This poster session will highlight advancements in the construction management of transportation infrastructure systems across a broad range of topics ranging from project partnering to commodity price indexes to mobile information systems.

Presiding Officer(s):

Edward Jaselskis, North Carolina State University

Sponsored By:

Standing Committee on Construction Management (AFH10)
Section - Construction (AFH00)
Subcommittee on Information Systems in Construction Management (AFH10 (1))

Presentation(s):

Artificial Neural Network Model for Estimating Temporal and Spatial Freeway Work Zone Delay Using Probe-Vehicle Data

- / **Bo Du**, New Jersey Institute of Technology
- / **I. Chien**, New Jersey Institute of Technology
- / **Joyoung Lee**, New Jersey Institute of Technology
- / **Lazar Spasovic**, New Jersey Institute of Technology
- / **Kyriacos Mouskos**, City College of New York

Optimizing Work Zone Schedule with Floating Car Data Considering Traffic Diversion and Managed Lanes

- / **Liuhui Zhao**, New Jersey Institute of Technology
- / **Bo Du**, New Jersey Institute of Technology
- / **I. Chien**, New Jersey Institute of Technology

Session 244

Advancement in the Construction Management of Transportation Facilities, Poster

Monday, January 11, 2016
8:30 AM- 10:15 AM

Convention Center, Hall E

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This poster session will highlight advancements in the construction management of transportation infrastructure systems across a broad range of topics ranging from project partnering to commodity price indexes to mobile information systems.

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Edward Jaselskis, North Carolina State University

Sponsored By:

Standing Committee on Construction Management (AFH10)

Section - Construction (AFH00)

Subcommittee on Information Systems in Construction Management (AFH10 (1))

Presentation(s):

Artificial Neural Network Model for Estimating Temporal and Spatial Free-way Work Zone Delay Using Probe-Vehicle Data

/ **Bo Du**, New Jersey Institute of Technology

/ **I. Chien**, New Jersey Institute of Technology

/ **Joyoung Lee**, New Jersey Institute of Technology

/ **Lazar Spasovic**, New Jersey Institute of Technology

/ **Kyriacos Mouskos**, City College of New York

Optimizing Work Zone Schedule with Floating Car Data Considering Traffic Diversion and Managed Lanes

/ **Liuhui Zhao**, New Jersey Institute of Technology

/ **Bo Du**, New Jersey Institute of Technology

/ **I. Chien**, New Jersey Institute of Technology

Session 251

Freight Modeling, Poster

Monday, January 11, 2016
8:30 AM- 10:15 AM

Convention Center, Hall E

Event Description:

This session features broad advances in freight modeling in areas of railroad, waterway, highway, and other modes by both private and public sectors. Public-sector topics are mainly in planning and operations, whereas the private-sector advances are primarily about modeling of their business operations such as logistics activities. Applications of new information technologies such as new models and use of new data are of particular interest in this session. Topics here have a wide variety to foster exchange of research ideas.

Presiding Officer(s):

Mohammadadel Khodakarami, Texas A&M Transportation Institute

Bruce Wang, Texas A&M Transportation Institute

Sponsored By:

Standing Committee on Freight Transportation Planning and Logistics (AT015)

Presentation(s):

Impacts of Information Technology and Urbanization on Less-Than-Truck-load Freight Flows in China: Analysis Considering Spatial Effects

/ **Linglin Ni**, Zhejiang University of Finance and Economics

/ **Xiaokun Wang**, Rensselaer Polytechnic Institute (RPI)

/ **Dapeng Zhang**, Rensselaer Polytechnic Institute (RPI)

Factors Influencing Freight Mode Choice: Insights from In-Depth Interviews

/ **Jose Holguin-Veras**, Rensselaer Polytechnic Institute (RPI)

/ **Shama Campbell**, Rensselaer Polytechnic Institute (RPI)

/ **Lokesh Kalahasthi**, Rensselaer Polytechnic Institute (RPI)

/ **Carlos Gonzalez-Calderon**, Rensselaer Polytechnic Institute (RPI)

/ **Jeffrey Wojtowicz**, Rensselaer Polytechnic Institute (RPI)

Young Members Council (YMC) Task Force

/ Monday, January 11, 2016
10:15 AM- 12:00 PM

/ Marriott Marquis,
Marquis Ballroom Salon 16 (M2)

Presiding Officer(s):

Alison Conway, City College of New York

Sponsored By:

Young Members Council (YMC) (A0040T)

Route Choice and Spatio-Temporal Behavior Joint Subcommittee of ADB10, ADB30

/ Monday, January 11, 2016
10:15 AM- 12:00 PM

/ Marriott Marquis, Independence
H (M4)

Presiding Officer(s):

Joseph Chow, New York University (NYU)

Sponsored By:

Standing Committee on Traveler Behavior and Values (ADB10)

Standing Committee on Transportation Network Modeling (ADB30)

Session 264

Resilient and Sustainable Transportation Networks, Lectern

/ Monday, January 11, 2016
10:15 AM- 12:00 PM

/ Convention Center, 146B

Presiding Officer(s):

Salvador Hernandez, Oregon State University

Sponsored By:

Standing Committee on Transportation Network Modeling (ADB30)

Presentation(s):

Beyond Distribution: Realistic Assessment of System-Wide Travel Time reliability in the Stochastic Traffic Network

/ Xiangfeng Ji, Southeast University

/ Xuegang Ban, Rensselaer Polytechnic Institute (RPI)

/ Mengtian Li, Southeast University

/ Jian Zhang, Southeast University

/ Bin Ran, Southeast University

Session 273

FRP Composite Field Applications, Part 1: Existing Structures (Part 2, Session 840), Lectern

/ Monday, January 11, 2016
10:15 AM- 12:00 PM

/ Convention Center, 206

Presiding Officer(s):

Wael Zatar, Marshall University

Ayman Okeil, Louisiana State University

Sponsored By:

Standing Committee on Structural Fiber Reinforced Polymers (AFF80)

Presentation(s):

Advances in FRP Composites in Transportation Infrastructure

/ Jerome O'Connor, University at Buffalo

/ Wayne Frankhauser, Jr., Maine Department of Transportation

Session 296

Current Research on Port Resilience, Disruptions, Vulnerability, and Cargo Diversion, Lectern

/ Monday, January 11, 2016
10:15 AM- 12:00 PM

/ Convention Center, 144A

Presiding Officer(s):

Naomi Fraenkel, U.S. Army Corps of Engineers (USACE)

Sponsored By:

Standing Committee on Ports and Channels (AW010)
Standing Committee on Intermodal Freight Terminal Design and Operations (AT050)

Presentation(s):

Decision-Making Guidelines to Enhance Port Supply Chain Resilience

- / Grace Python, ANSER Corporation
- / Thomas Wakeman, Stevens Institute of Technology

Session 304

Information Technology Applications for Travel Monitoring and Connected Vehicles (14), Poster

/ Monday, January 11, 2016
10:45 AM- 12:30 PM

/ Convention Center, Hall E

Event Description:

This poster session highlights recent research related to data management in support of connected-vehicle applications and use of sensing, mobile, and social media technologies for travel monitoring (of both traffic and transit).

Presiding Officer(s):

Guohui Zhang, University of New Mexico

Sponsored By:

Standing Committee on Information Systems and Technology (ABJ50)
Standing Committee on Geographic Information Science and Applications (ABJ60)

Presentation(s):

Data Warehouse Development and Real-Time Incident Detection

- / Andrew Bartlett, University at Buffalo
- / Adel Sadek, University at Buffalo

Evaluating Usability of Geo-located Twitter as a Tool for Human Activity and Mobility Patterns: Case Study for New York City

- / Abdullah Kurkcu, New York University (NYU)
- / Kaan Ozbay, New York University (NYU)
- / Ender Morgul, New York University (NYU)

Estimating Local Road VMT: Comparative Analysis of Spatial Interpolation Techniques (16-4287)

- / Trevor J. Klatko, Purdue University
- / Tariq Usman Saeed, Purdue University
- / Matthew Volovski
- / Samuel Labi, Purdue University
- / Jon Fricker, Purdue University
- / Kumares Sinha, Purdue University

Session 307

Logistics of Disaster Response and Business Continuity, Poster

/ Monday, January 11, 2016
10:45 AM- 12:30 PM

/ Convention Center, Hall E

Presiding Officer(s):

Anne Strauss-Wieder, A. Strauss-Wieder, Inc.

Sponsored By:

Standing Committee on the Logistics of Disaster Response and Business Continuity (ABR20)

Presentation(s):

Using Big Data to Study Resilience of Taxi and Subway Trips for Hurricanes Sandy and Irene

- / Yuan Zhu, New York University (NYU)
- / Kaan Ozbay, New York University (NYU)
- / Kun Xie, New York University (NYU)
- / Hong Yang, Old Dominion University

Session 308

Research Trends in Evacuation Transportation Modeling and Analysis, **Poster**

Monday, January 11, 2016
10:45 AM- 12:30 PM

Convention Center, Hall E

Presiding Officer(s):

Atri Sen, HNTB Corporation

Sponsored By:

Standing Committee on Emergency Evacuations (ABR30)

Presentation(s):

Network Modeling of Hurricane Evacuation Using Data-Driven Demand and Incident-Induced Capacity Loss Models

- / Yuan Zhu, New York University (NYU)
- / Kaan Ozbay, New York University (NYU)
- / Kun Xie, New York University (NYU)
- / Hong Yang, Old Dominion University
- / Ender Morgul, New York University (NYU)

Statistical Analysis of Dynamics of Household Hurricane-Evacuation Decisions

- / Md Tawfiq Sarwar, University at Buffalo
- / Panagiotis Anastasopoulos, University at Buffalo
- / Satish Ukkusuri, Purdue University
- / Pamela Murray-Tuite, Virginia Polytechnic Institute and State University
- / Fred Mannering, Purdue University

Session 314

Select Papers on Basic Research and Emerging Technologies Related to Concrete, **Poster**

Monday, January 11, 2016
10:45 AM- 12:30 PM

Convention Center, Hall E

Event Description:

This committee is concerned with advancing basic research and emerging technologies related to concrete and materials used in concrete. The committee also undertakes technology transfer activities to assist practitioners in implementing new and existing technologies.

Presiding Officer(s):

John Kevern, University of Missouri, Kansas City

Sponsored By:

Standing Committee on Basic Research and Emerging Technologies Related to Concrete (AFN10)
Task Force on Nanotechnology-Based Concrete Materials (AFN15T)
Standing Committee on Structural Fiber Reinforced Polymers (AFF80)

Presentation(s):

Influence of Nanosilica and Clay on the Strength, Workability, and Porosity of Alkali-Activated Slag Mortars

- / Sulapha Peethamparan, Clarkson University
- / Zihui Li, Clarkson University

Session 316

Defining Concrete Properties: Test Methods to Ensure Quality, **Poster**

Monday, January 11, 2016
10:45 AM- 12:30 PM

Convention Center, Hall E

Event Description:

This session will consider different testing methods used to evaluate concrete that will ensure quality and durability when used in transportation structures and pavements.

Presiding Officer(s):

Heather McLeod, James Madison University

Sponsored By:

Standing Committee on Durability of Concrete (AFN30)

Presentation(s):

Modified Test for Chloride Permeability of Alkali-Activated Concrete

- / Robert Thomas, Clarkson University
- / Sulapha Peethamparan, Clarkson University

Session 320

Seasonal Effects on Soils and Pavements, **Poster**

/ Monday, January 11, 2016
10:45 AM- 12:30 PM

/ Convention Center, Hall E

Presiding Officer(s):

Steve Saboundjian, Alaska Department of Transportation and Public Facilities

Sponsored By:

Standing Committee on Seasonal Climatic Effects on Transportation Infrastructure (AFP50)

Presentation(s):

Enhancements to a Simple Pavement Frost Model

- / **Brendan Duffy**, Cornell Local Roads Program
- / **David Orr**, Cornell Local Roads Program
- / **Heather Miller**, University of Massachusetts, Dartmouth

Session 323

Freeway Traffic Control (18), **Poster**

/ Monday, January 11, 2016
10:45 AM- 12:30 PM

/ Convention Center, Hall E

Event Description:

This poster session contains papers that deal with freeway traffic control and freeway network management. This group includes papers with topics such as ramp metering, variable speed limit, and incident management.

Presiding Officer(s):

Robert Bertini, California Polytechnic State University

Sponsored By:

Standing Committee on Freeway Operations (AHB20)

Presentation(s):

Life-Cycle Benefit-Cost Analysis Framework for Ramp Metering Deployments

- / **Xifan Chen**, Syracuse University
- / **O. Salem**, Syracuse University
- / **Baris Salman**, Syracuse University

Identifying On-Site Traffic Accidents using Both Traffic and Social Media Data

- / **Zhenhua Zhang**, State University of New York (SUNY)
- / **Ming Ni**, University at Buffalo
- / **Qing He**, University at Buffalo
- / **Jing Gao**
- / **Jizhan Gou**
- / **Xiaoling Li**, Virginia Department of Transportation

Session 328

Current Research Advances in Maritime Transportation, **Poster**

/ Monday, January 11, 2016
10:45 AM- 12:30 PM

/ Convention Center, Hall E

Presiding Officer(s):

Maxim Dulebenets, University of Memphis

Sponsored By:

Standing Committee on Ports and Channels (AW010)

Presentation(s):

Free Ports: Toward a Network of Trade Gateways

- / **Alexandre Lavissiere**, Ecole de Management de Normandie
- / **Jean-Paul Rodrigue**, Hofstra University

Session 337

Evacuations as a Component of Transportation Resilience, **Lectern**

Monday, January 11, 2016
1:30 PM- 3:15 PM

Convention Center, 151B

Presiding Officer(s):

R. Michael Robinson, Old Dominion University

Sponsored By:

Standing Committee on Emergency Evacuations (ABR30)

Presentation(s):

Data-Driven Method for Predicting Future Evacuation Zones in the Context of Climate Change

- /Kun Xie, New York University (NYU)
- /Kaan Ozbay, New York University (NYU)
- /Yuan Zhu, New York University (NYU)
- /Hong Yang, Old Dominion University

Session 367

Current Research on Freight Rail Transportation, **Lectern**

Monday, January 11, 2016
1:30 PM- 3:15 PM

Convention Center, 149

Presiding Officer(s):

George Grimes, Patriot Rail Company

Sponsored By:

Standing Committee on Freight Rail Transportation (AR040)

Presentation(s):

Review and Evaluation of New Jersey Rail Grant Program

- /Bekir Bartin
- /Kaan Ozbay, New York University (NYU)
- /W. Allen, University of Pennsylvania
- /Shrisan Iyer
- /Martin Robins, Rutgers, The State University of New Jersey
- /Marc Weiner, Rutgers, The State University of New Jersey
- /Hani Nassif, Rutgers, The State University of New Jersey

Visibility Committee

Monday, January 11, 2016
1:30 PM- 5:30 PM

Marriott Marquis, Marquis Ballroom Salon 10 (M2)

Event Description:

The Committee on Visibility (AND40) deals with the provision of visual information to transportation system users through lighting, signals, signs, markers and other means. The meeting will include a mini-session with presented papers on safety impacts of road lighting and reduced-visibility conditions.

Presiding Officer(s):

John Bullough, Rensselaer Polytechnic Institute (RPI)

Sponsored By:

Standing Committee on Visibility (AND40)

Session 374

Current Trends in Transportation Funding and Financing, Poster

Monday, January 11, 2016
2:00 PM- 3:45 PM

Convention Center, Hall E

Event Description:

Transportation agencies are facing what are widely accepted as the most serious fiscal challenges in nearly a century. Most critically, fuel tax revenue is declining in relation to road use, whereas transportation costs are continuing to increase with inflation. In light of this situation, many innovative funding and financing methods have been proposed or implemented. This session will highlight some of these methods.

Presiding Officer(s):

Ronald Davis, CDM Smith

Sponsored By:

Standing Committee on Revenue and Finance (ABE10)

Presentation(s):

Updating State and Local Highway Cost Allocation and Revenue Attribution: A Case Study for Indiana (16-4368)

/Chaitanya Pathak, New Jersey Institute of Technology

/Bismark Agbelie, Purdue University

/Matthew Volovski

/Zhibo Zhang, Purdue University

/Eleni Bardaka, Purdue University

/Samuel Labi, Purdue University

/Kumares Sinha, Purdue University

Evaluation of Highway Financing Options on the Basis of User Equities (16-6699)

/Bismark Agbelie, Purdue University

/Matthew Volovski

/Samuel Labi, Purdue University

/Kumares Sinha, Purdue University

Session 378

New Research in Travel Time, Speed, and Reliability (17), Poster

Monday, January 11, 2016
2:00 PM- 3:45 PM

Convention Center, Hall E

Event Description:

The session covers new topics related to the use, analysis, and estimation of travel time, speed, and reliability data. Topics covered in this session include estimation of travel time and travel time reliability, methods to analyze and process probe data, travel time performance measures, examination of new probe data sources, methods to visualize reliability data, and collection and analysis of arterial performance data.

Presiding Officer(s):

Michael Fontaine, Virginia Transportation Research Council

Sponsored By:

Standing Committee on Urban Transportation Data and Information Systems (ABJ30)
Subcommittee on Travel Time Speed and Reliability (ABJ30(3))

Presentation(s):

Geo-Spatial Analysis of Bluetooth Signal Reception and Its Implications on Arterial Travel Time Estimation

/Chaitanya Pathak, New Jersey Institute of Technology

/Jyoung Lee, New Jersey Institute of Technology

/Kitae Kim, New Jersey Institute of Technology

/Branislav Dimitrijevic, New Jersey Institute of Technology

/Lazar Spasovic, New Jersey Institute of Technology

Session 380

New Directions in Travel Surveys: Big Data, Smartphones, and Stated Preference (13), Poster

Monday, January 11, 2016
2:00 PM- 3:45 PM

Convention Center, Hall E

Event Description:

This session includes all the greatest research into value of time, stated preference, origin-destination, transit, and household travel surveys (including the use of smartphones), as well as the use of big data to replicate travel found in surveys.

Presiding Officer(s):

Guy Rousseau, Atlanta Regional Commission

Sponsored By:

Standing Committee on Travel Survey Methods (ABJ40)

Presentation(s):

Fast Online Travel Mode Identification using Smartphone Sensors

- /Xing Su, City University of New York (CUNY)
- /Hernan Caceres Venegas
- /Hanghang Tong
- /Qing He, University at Buffalo

Session 386

Capacity and Level-of-Service Issues at Intersections (21), Poster

Monday, January 11, 2016
2:00 PM- 3:45 PM

Convention Center, Hall E

Sponsored By:

Standing Committee on Highway Capacity and Quality of Service (AHB40)

Presentation(s):

Refinement of Intersection Base Saturation Flow Rates - New Jersey Case Study

- /Kitae Kim, New Jersey Institute of Technology
- /Joyoung Lee, New Jersey Institute of Technology
- /Slobodan Gutesa, New Jersey Institute of Technology
- /Branislav Dimitrijevic, New Jersey Institute of Technology
- /Wasif Mirza, New Jersey Department of Transportation
- /Lazar Spasovic, New Jersey Institute of Technology

The Signalized Intersection Method of the Highway Capacity Manual: A State of Crisis

- /Michael Kyte, University of Idaho
- /Brandon Nevers, Kittelson & Associates, Inc. (KAI)
- /Roger Roess, Polytechnic University of New York
- /Richard Dowling, Kittelson & Associates, Inc. (KAI)

Session 388

Highway Safety Performance, Poster

Monday, January 11, 2016
2:00 PM- 3:45 PM

Convention Center, Hall E

Presiding Officer(s):

John Nitzel, CH2M

Sponsored By:

Standing Committee on Highway Safety Performance (ANB25)

Presentation(s):

Enhancing Safety Performance Function-Based Safety Assessment Using Microsimulation Approach

- /Jaehyun So, Technische Universitaet Muenchen
- /David Hale, Leidos, Inc.
- /David Petrucci, Federal Highway Administration (FHWA)
- /Joyoung Lee, New Jersey Institute of Technology
- /Mandar Khanal, Boise State University
- /Peng Su, Leidos, Inc.

Session 397

Innovations in Statistical Methods for Transportation Researchers and Practitioners, Lectern

/ Monday, January 11, 2016
3:45 PM- 5:30 PM

/ Convention Center, 150B

Presiding Officer(s):

Panagiotis Anastasopoulos, University at Buffalo

Sponsored By:

Standing Committee on Statistical Methods (ABJ80)

Session 398

Leadership Skills for Disaster Response and Business Continuity: Results from TRB Table Top Exercise and Lessons from Private Industry, Lectern | Spotlight Theme

/ Monday, January 11, 2016
3:45 PM- 5:30 PM

/ Marriott Marquis, Marquis Ballroom Salon 10 (M2)

Presiding Officer(s):

Thomas Wakeman, Stevens Institute of Technology

Sponsored By:

Section - Transportation Systems Resilience (ABR00)

Standing Committee on Critical Transportation Infrastructure Protection (ABR10)

Standing Committee on the Logistics of Disaster Response and Business Continuity (ABR20)

Standing Committee on Emergency Evacuations (ABR30)

Session 411

Reuse of Bridge Foundations, Lectern

/ Monday, January 11, 2016
3:45 PM- 5:30 PM

/ Convention Center, Hall E

Presiding Officer(s):

Mohammed Mulla, North Carolina Department of Transportation

Sponsored By:

Standing Committee on Soil and Rock Properties (AFP30)

Standing Committee on Transportation Earthworks (AFS10)

Standing Committee on Foundations of Bridges and Other Structures (AFS30)

Presentation(s):

Integrated Superstructure-Substructure Load Rating of Bridges

/ **Anil Agrawal**, The City College of New York, CUNY

/ **Masoud Sanayei**, Tufts University

/ **Nathan Davis**

Session 421

New Research on Alcohol and Driving, Lectern

/ Monday, January 11, 2016
3:45 PM- 5:30 PM

/ Convention Center, 103A

Presiding Officer(s):

C. Bingham, UM Transportation Research Institute

Sponsored By:

Standing Committee on Alcohol, Other Drugs, and Transportation (ANB50)

Presentation(s):

Drinking and Driving Behavior at Stop Signs

/ **Jingyan Wan**, University at Buffalo

/ **Changxu Wu**, University at Buffalo

/ **Yiqi Zhang**, University at Buffalo

/ **Rebecca Houston**, University at Buffalo

/ **Chang Wen Chen**, University at Buffalo

/ **Panya Chanawangsa**, University at Buffalo

Session 427

Urban Freight Transportation: Innovations and Best Practices, **Lectern** | **Spotlight Theme**

Monday, January 11, 2016
3:45 PM- 5:30 PM

Convention Center, Hall E

Event Description:

Although many cities across the world share similar challenges concerning urban freight--congestion, pollution, economic costs, and more--the approaches to address them vary greatly. In this session, researchers from around the world will share their knowledge and experiences on promising strategies. The aim is to provide an arena for dissemination and exchange of knowledge, promoting transfer and cross-fertilization of ideas among researchers and practitioners.

Presiding Officer(s):

Erica Wygonik, RSG

Sponsored By:

Standing Committee on Urban Freight Transportation (AT025)

Presentation(s):

Freight in a Bicycle-Friendly City: An Exploratory Analysis

- / **Kitae Kim**, New Jersey Institute of Technology
- / **Alison Conway**, City College of New York
- / **Nathan Tavernier**, Ecole Nationale des Travaux Publics de l'Etat
- / **Xue Bing Yeap**, City College of New York
- / **Lisa Chauvet**
- / **Medwin Chiu**, City College of New York
- / **Niloofer Ghahramani**, City College of New York
- / **Victor Tavares Leal**, Federal University of Pará

Potential Market of Freight Demand Management

- / **Jose Holguin-Veras**, Rensselaer Polytechnic Institute (RPI)
- / **Felipe Aros-Vera**, Ohio University

Commercial Vehicle Parking Availability and Behavior for Residential Delivery in New York City

- / **Quanquan Chen**, City College of New York
- / **Alison Conway**, City College of New York

Session 436

SHRP 2 Education Connection, Part 1: Integrating SHRP 2 Products into University Curricula, **Poster**

Monday, January 11, 2016
4:15 PM- 6:00 PM

Convention Center, Hall E

Event Description:

This session will include posters by nine university professors selected to receive FHWA Education Connection grants to develop lesson plans and case studies that integrate SHRP 2 solutions into their curricula. Topics include travel-time reliability and incident management; environmental assessment; structural, geotechnical, and pavement engineering; nondestructive testing; subsurface utility location; travel demand modeling; and others.

Presiding Officer(s):

Joseph Conway, Federal Highway Administration (FHWA)

Sponsored By:

Standing Committee on Technology Transfer (ABG30)
Standing Committee on Transportation Education and Training (ABG20)

Integration of SHRP 2 Products Within the Civil Engineering Curriculum

- / **Yusuf Mehta**, Rowan University
- / **Parth Bhavsar**, Rowan University
- / **Ayman Ali**, Rowan University

Session 438

Current Issues in Transportation and Air Quality, Poster

Monday, January 11, 2016
4:15 PM- 6:00 PM

Convention Center, Hall E

Presiding Officer(s):

Christopher Porter, Cambridge Systematics, Inc.

Sponsored By:

Standing Committee on Transportation and Air Quality (ADC20)

Presentation(s):

An Exploratory Study on the Correlation between Twitter Concentration and Traffic Surge

- /Zhenhua Zhang, State University of New York (SUNY)
- /Ming Ni, University at Buffalo
- /Qing He, University at Buffalo
- /Jing Gao
- /Jizhan Gou
- /Xiaoling Li, Virginia Department of Transportation

Session 445

Capacity and Level-of-Service Issues for Freeways and Other Facility Types (19), Poster

Monday, January 11, 2016
4:15 PM- 6:00 PM

Convention Center, Hall E

Presiding Officer(s):

John Hencken, Rutgers, The State University of New Jersey

Sponsored By:

Standing Committee on Highway Capacity and Quality of Service (AHB40)

Presentation(s):

Drinking and Driving Behavior at Stop Signs

- /Jingyan Wan, University at Buffalo
- /Changxu Wu, University at Buffalo
- /Yiqi Zhang, University at Buffalo
- /Rebecca Houston, University at Buffalo
- /Chang Wen Chen, University at Buffalo
- /Panya Chanawangsa, University at Buffalo

Session 448

Numbers in Safety: Revealing What's Behind Them Through Advances in Assembling, Analyzing, and Modeling Crash Data, Poster

Monday, January 11, 2016
4:15 PM- 6:00 PM

Convention Center, Hall E

Presiding Officer(s):

Peter Savolainen, Iowa State University

Sponsored By:

Standing Committee on Safety Data, Analysis and Evaluation (ANB20)

Presentation(s):

Joint Analysis of Secondary Collisions and Injury Severity Levels Using Structural Equation Models

- /Kun Xie, New York University (NYU)
- /Kaan Ozbay, New York University (NYU)
- /Hong Yang, Old Dominion University

Factors Affecting Freeway Safety: Analysis of Single- and Multivehicle Crashes in Shanghai, China

- /Xuesong Wang, Tongji University
- /Yan Li, Tongji University
- /Ting Wang, Tongji University
- /Xiaokun Wang, Rensselaer Polytechnic Institute (RPI)
- /Rongjie Yu, School of Transportation Engineering Tongji University

Session 451

Bus Transit Research and Practices, Poster

Monday, January 11, 2016
4:15 PM- 6:00 PM

Convention Center, Hall E

Presiding Officer(s):

Thomas Schwetz, Lane Transit District

Sponsored By:

Standing Committee on Bus Transit Systems (AP050)

Presentation(s):

Rider Perception of "Light" Bus Rapid Transit System: New York City Select Bus Service

- /Dan Wan, City College of New York
- /Camille Kamga, City College of New York
- /Aaron Sugiura, New York City Department of Transportation
- /Eric Beaton, New York City Department of Transportation
- /Wei Hao, City University of New York (CUNY)

B44 Select Bus Service on Nostrand Avenue: Bus Rapid Transit-Induced Mode Shift and Route Shift in Transit-Dense Brooklyn

- /Jeremy Safran, New York City Department of Transportation
- /Eric Beaton, New York City Department of Transportation
- /Robert Thompson, Metropolitan Transportation Authority (MTA)
- /Dan Wan, City College of New York
- /Jonathan Joseph, Metropolitan Transportation Authority (MTA)
- /Joseph Chiarmonte, New York City Transit

Improving Vehicle Emissions of Bus Transit with Integrated Service and Different Vehicle Sizes

- /HEZHOU QU
- /I. Chien, New Jersey Institute of Technology
- /Xiaobo Liu, Southwest Jiaotong University

Session 453

Innovations in Rail Transit System Modeling, Optimization, and Simulation, Poster

Monday, January 11, 2016
4:15 PM- 6:00 PM

Convention Center, Hall E

Presiding Officer(s):

Yingling Fan, University of Minnesota

Sponsored By:

Standing Committee on Rail Transit Systems (AP065)

Presentation(s):

Nonrecurrent Subway Passenger Flow Prediction from Social Media Under Event Occurrences

- /Ming Ni, University at Buffalo
- /Qing He, University at Buffalo
- /Jing Gao

Session 456

Research in International Trade and Transportation, Poster

Monday, January 11, 2016
4:15 PM- 6:00 PM

Convention Center, Hall E

Presiding Officer(s):

Michael Bomba, University of North Texas

Sponsored By:

Standing Committee on International Trade and Transportation (AT020)

Presentation(s):

Ultra-Large Containerships: Analysis of Economies of Scale

/Chang Guan, U.S. Merchant Marine Academy

/Shmuel Yahalom, State University of New York (SUNY)

/Daniel Jun Yu, Shanghai Maritime University

Freight Modeling Subcommittee, AT015(1)

Monday, January 11, 2016
7:30 PM- 9:30 PM

Marriott Marquis, Woodley Park (M3)

Event Description:

This meeting invites all researchers and practitioners with interest and experiences in freight modeling from the private sector to the public sector to share ideas and progress. The U.S. freight policy and new initiatives will be updated.

Presiding Officer(s):

J. Lahsene, Port of Portland, Oregon

Bruce Wang, Texas A&M Transportation Institute

Joseph Chow, New York University (NYU)

Sponsored By:

Standing Committee on Freight Transportation Planning and Logistics (AT015)
Subcommittee on Freight Modeling (AT015(1))

Public Transportation Group Young Members Subcommittee, AP000 (2)

Monday, January 11, 2016
7:30 PM- 9:30 PM

Marriott Marquis, Union Station (M3)

Presiding Officer(s):

Candace Brakewood, City College of New York

Theodore Rosenbaum, LTK Engineering Services, Inc.

Sponsored By:

Public Transportation Group (AP000)

Subcommittee on Public Transportation Group Young Members (AP000(2))

Session 480

Effective, Practical Methods for Technology Transfer, Lectern

Tuesday, January 12, 2016
8:00 AM- 9:45 AM

Convention Center, 152B

Event Description:

This session will feature fast-paced presentations from different states on how to use innovative methods for getting recently developed technologies and procedures into the hands of transportation practitioners. The focus will be on practical methods pioneered by Local Technical Assistance Programs. Examples include smartphone apps for guidelines on installation and maintenance, self-paced online training, YouTube videos, circuit training, and operational research assistance to encourage practitioner innovations.

Presiding Officer(s):

James Grothaus, University of Minnesota

Sponsored By:

Standing Committee on Technology Transfer (ABG30)

Standing Committee on Transportation Education and Training (ABG20)

Presentation(s):

More Than One Way to.... Transfer Knowledge to Field Crews

/ **David Orr**, Cornell Local Roads Program

Session 500

State Maintenance Practice Case Studies, Lectern

Tuesday, January 12, 2016
8:00 AM- 9:45 AM

Convention Center, 204C

Event Description:

This session presents case studies of state maintenance practices, ranging from outsourced asset maintenance to prioritization to social media.

Presiding Officer(s):

Lonnie Hendrix, Arizona Department of Transportation

Sponsored By:

Standing Committee on Maintenance and Operations Management (AHD10)

Presentation(s):

Use of Social Media by Transportation Agencies for Traffic Management

/ **Jeffrey Wojtowicz**, Rensselaer Polytechnic Institute (RPI)

/ **William Wallace**, Rensselaer Polytechnic Institute (RPI)

Session 501

Deterioration and Condition Modeling for Bridge Management Systems, LECTERN / Tuesday, January 12, 2016 / Convention Center, 204C
8:00 AM- 9:45 AM

Event Description:

Presentations will describe the use of deterioration prediction methods and condition evaluation in bridge management systems. Examples of the use of these methods in operating bridge management systems will be given.

Presiding Officer(s):

Basak Bektas, Iowa State University

Sponsored By:

Standing Committee on Bridge Management (AHD35)

Presentation(s):

Service Life and Condition Rating Prediction of Steel Bridges: New Evidence Using Three-Stage Least Squares Modeling (16-1730)

/ **Jeffrey Wojtowicz**, Rensselaer Polytechnic Institute (RPI)

Steven Lavrenz, Purdue University

Jackeline Murillo Hoyos, Purdue University

Tariq Usman Saeed, Purdue University

Matthew Volovski

Samuel Labi, Purdue University

Session 511

Case Studies for Improving Passenger Ferry Service, LECTERN / Tuesday, January 12, 2016 / Convention Center, 143C
8:00 AM- 9:45 AM

Presiding Officer(s):

Lauren Dong, Arup

Sponsored By:

Standing Committee on Ferry Transportation (AP085)

Presentation(s):

Using Mobile Ticketing Data to Estimate an Origin-Destination Matrix for New York City Ferry Service

/ **Subrina Rahman**

/ **James Wong**, New York City Economic Development Corporation

/ **Candace Brakewood**, City College of New York

Artificial Intelligence and Advanced Computing Applications Committee / Tuesday, January 12, 2016 / Marriott Marquis, Liberty O (M4)
8:00 AM- 12:00 PM

Presiding Officer(s):

Sherif Ishak, Louisiana State University

Adel Sadek, University at Buffalo

Sponsored By:

Standing Committee on Artificial Intelligence and Advanced Computing Applications (ABJ70)

Session 529

Current Issues in Alternative Transportation Fuels and Technologies, **Poster**

Tuesday, January 12, 2016
8:30 AM- 10:15 AM

Convention Center, Hall E

Presiding Officer(s):

Timothy Lipman, University of California, Berkeley

Sponsored By:

Standing Committee on Alternative Transportation Fuels and Technologies (ADC80)

Presentation(s):

Equilibrium Scheduling of Vehicle-to-Grid Technology Using Activity-Based Modeling

- / Mehdi Nourinejad, University of Toronto
- / Joseph Chow, New York University (NYU)
- / Matthew Roorda, University of Toronto

A County Level Study of the Impact of Plug-In Hybrid Electric Vehicles in New Jersey

- / Neil McCall, Rowan University
- / Dan Bailey, Rowan University
- / Shalyn Brangman, Rowan University
- / Joseph Diorio, Rowan University
- / Gary Haes, Rowan University
- / Jenna Ledig, Rowan University
- / Jason Shaub, Rowan University
- / William Weldon, Rowan University
- / Krishan Bhatia, Rowan University
- / Parth Bhavsar, Rowan University
- / William Riddell, Rowan University

Session 533

Preparing, Planning, and Assessing Readiness of the Next Generation of Intelligent Transportation Systems (15), **Poster**

Tuesday, January 12, 2016
8:30 AM- 10:15 AM

Convention Center, Hall E

Event Description:

Intelligent transportation systems have become critical components of transportation operations and management systems. The rapidly developing technologies, including connected and automated vehicles as well as advanced parking systems, require new approaches to the planning, readiness assessment, and deployment preparation. This poster session includes innovative approaches to preparing for new technologies and capabilities.

Presiding Officer(s):

Larry Head, University of Arizona

Sponsored By:

Standing Committee on Intelligent Transportation Systems (AHB15)

Presentation(s):

Tablet-Based Surrogate System Architecture for In Situ Evaluation of Cyberphysical Transport Technologies

- / Matthew Harvey, Ryerson University
- / Xintao Liu, Ryerson University
- / Joseph Chow, New York University (NYU)

Session 534

Advances in Adaptive Signal Control and Optimization (19), Poster

Tuesday, January 12, 2016
8:30 AM- 10:15 AM

Convention Center, Hall E

Presiding Officer(s):

Qing He, University at Buffalo

Sponsored By:

Standing Committee on Traffic Signal Systems (AHB25)

Presentation(s):

Reliability-Based Traffic Signal Control for Urban Arterial Roads

- /Xiaobo Liu, Southwest Jiaotong University
- /Fangfang Zheng, Southwest Jiaotong University
- /Henk van Zuylen, Delft University of Technology
- /Scott Le Vine, SUNY New Paltz / Imperial College

Session 536

Traffic Flow Theory and Characteristics, Part 1 (21), Poster

Tuesday, January 12, 2016
8:30 AM- 10:15 AM

Convention Center, Hall E

Sponsored By:

Standing Committee on Traffic Flow Theory and Characteristics (AHB45)

Presentation(s):

Application of Bayesian Stochastic Learning Automata for Modeling Lane Choice Behavior in SR-167 HOT Lanes

- /Ender Morgul, New York University (NYU)
- /Kaan Ozbay, New York University (NYU)
- /Abdullah Kurkcu, New York University (NYU)

Session 537

Traffic Flow Theory and Characteristics, Part 2 (24), Poster

Tuesday, January 12, 2016
8:30 AM- 10:15 AM

Convention Center, Hall E

Presiding Officer(s):

Vikash Gayah, Pennsylvania State University

Sponsored By:

Standing Committee on Traffic Flow Theory and Characteristics (AHB45)

Presentation(s):

Automated Road Vehicles: Queue Discharge at Signalized Intersections with Defensive Driving Strategies

- /Scott Le Vine, SUNY New Paltz / Imperial College
- /Xiaobo Liu, Southwest Jiaotong University
- /Fangfang Zheng
- /John Polak, Imperial College London

Link Travel Time Approximation in Double Queue Traffic Model

- /Xia Yang, Rensselaer Polytechnic Institute (RPI)
- /Xuegang Ban, Rensselaer Polytechnic Institute (RPI)
- /Rui Ma, University of California

Transformative Transit Data Joint Subcommittee of AP000, ABJ00

Tuesday, January 12, 2016
10:15 AM- 12:00 PM

Marriott Marquis,
L'Enfant Plaza (M3)

Presiding Officer(s):

Catherine Lawson, State University of New York, Albany

Sponsored By:

Public Transportation Group (AP000)
Section - Data and Information Systems (ABJ00)

Session 571

Sociodemographic Effects on Transit Quality of Service Perceptions, **Lectern**

Tuesday, January 12, 2016
10:15 AM- 12:00 PM

Convention Center, 144B

Event Description:

The four papers in this session explore how differences in public transit passengers' social and demographic characteristics influence their perceptions of transit service quality and the conditions under which they would consider themselves to be "satisfied" with service. Transit service providers seeking to improve the quality of service they provide may need to account for these differences when considering potential service enhancements.

Presiding Officer(s):

Victoria Perk, USF Center for Urban Transportation Research

Sponsored By:

Standing Committee on Transit Capacity and Quality of Service (AP015)

Presentation(s):

A comparative study of passenger satisfaction with Bus Rapid Transit with and without awareness of travel information

/ **Dan Wan**, City College of New York

/ **Camille Kamga**, City College of New York

/ **Jun Liu**, University of Tennessee, Knoxville

/ **Aaron Sugiura**, New York City Department of Transportation

/ **Eric Beaton**, New York City Department of Transportation

Session 575

Innovation in Passenger Rail Equipment and System Integration, **Lectern**

Tuesday, January 12, 2016
10:15 AM- 12:00 PM

Convention Center, 144A

Event Description:

This session will focus on changes in the passenger rail equipment industry including regulatory developments, innovative equipment designs, maintenance strategies, and procurement of innovative trainsets. Presentations will include updates on federal research topics based on recent accident history, an international review of passenger rail accidents, and maintenance strategies.

Presiding Officer(s):

Eloy Martinez, LTK Engineering Services, Inc.

Sponsored By:

Standing Committee on Passenger Rail Equipment and Systems Integration (AR020)

Presentation(s):

Identification of Railcar Asymmetric Wheel Wear with Extreme Value Theory

/ **Yu Cui**, University at Buffalo

/ **Qing He**, University at Buffalo

/ **Zhenhua Zhang**, State University of New York (SUNY)

/ **Zhiguo Li**, IBM, Thomas J. Watson Research Center

Session 592

Active Research on Safety of Pedestrian and Bicycle Transportation, **Poster**

Tuesday, January 12, 2016
10:45 AM- 12:30 PM

Convention Center, Hall E

Presiding Officer(s):

Thomas Jonsson, Norwegian University of Science and Technology (NTNU)

Sponsored By:

Standing Committee on Safety Data, Analysis and Evaluation (ANB20)

Presentation(s):

Analysis of Pedestrian Safety Using Big Data

/ **Kun Xie**, New York University (NYU)

/ **Kaan Ozbay**, New York University (NYU)

/ **Hong Yang**, Old Dominion University

Session 593

Safety Analysis with Surrogate Measures, Poster

/ Tuesday, January 12, 2016
10:45 AM- 12:30 PM

/ Convention Center, Hall E

Presiding Officer(s):

Nicolas Saunier, Polytechnique Montreal

Sponsored By:

Standing Committee on Safety Data, Analysis and Evaluation (ANB20)

Presentation(s):

Analysis of Collisions and Applicability of V2V Solutions for U.S. Urban Areas

/ Wei Hao, City University of New York (CUNY)

/ Camille Kamga, City College of New York

/ Dan Wan, City College of New York

Session 598

Millennials and Our Connected Multi-modal Future, Part 1: Travel Behavior, Lectern

/ Tuesday, January 12, 2016
1:30 PM- 3:15 PM

/ Convention Center, 144A

Event Description:

As Part 1 of a two-part program, this session will highlight recent work by young researchers studying travel trends relevant to the millennial generation.

Presiding Officer(s):

Eduardo Maeyama, WSP|Parsons Brinckerhoff

Sponsored By:

Young Members Council (YMC) (A0040T)

Presentation(s):

E-Commerce and Shopping Behavior

/ Xiaokun Wang, Rensselaer Polytechnic Institute (RPI)

Session 604

Emerging Research in Emergency Evacuation, Lectern

/ Tuesday, January 12, 2016
1:30 PM- 3:15 PM

/ Convention Center, 151B

Presiding Officer(s):

Brian Wolshon, Louisiana State University

Sponsored By:

Standing Committee on Emergency Evacuations (ABR30)

Presentation(s):

Feature Selection for Ranking of Most Influential Variables for Evacuation Behavior Modeling across Disasters

/ Sami Demiroglu, Rutgers, The State University of New Jersey

/ Anil Yazici, SUNY College, Stony Brook

/ Kaan Ozbay, New York University (NYU)

/ Jon Carnegie, Rutgers, The State University of New Jersey

Modeling Evacuation Behavior under Hurricane Conditions

/ Hong Yang, Old Dominion University

/ Ender Morgul, New York University (NYU)

/ Kaan Ozbay, New York University (NYU)

/ Kun Xie, New York University (NYU)

Session 626

Dynamic Control and Assessment of Lighting for Visibility, Lectern

/ Tuesday, January 12, 2016
1:30 PM- 3:15 PM

/ Marriott Marquis,
L'Enfant Plaza (M3)

Event Description:

Interest continues to grow in adaptive lighting for vehicles and for fixed roadway illumination systems, as well as techniques for measuring and characterizing lighting system performance in real time. The presenters will discuss recent developments in these areas, including impacts on visibility, safety, and planning decisions.

Presiding Officer(s):

Ida Van Schalkwyk, Washington State Department of Transportation

Sponsored By:

Standing Committee on Visibility (AND40)

Presentation(s):

Assessment of an Adaptive Driving Beam Headlighting System: Visibility and Glare

/ **John Bullough**, Rensselaer Polytechnic Institute (RPI)

/ **Nicholas Skinner**, Rensselaer Polytechnic Institute (RPI)

/ **Timothy Plummer**, Rensselaer Polytechnic Institute (RPI)

Session 631

Freight Day, Part 3: Key Freight Trends That Have Not Yet Shown Up in the Data, Lectern

/ Tuesday, January 12, 2016
1:30 PM- 3:15 PM

/ Convention Center, 145B

Presiding Officer(s):

Alison Conway, City College of New York

Sponsored By:

Freight Systems Group (AT000)

Marine Group (AW000)

Session 632

Advances in Freight Modeling, Lectern

/ Tuesday, January 12, 2016
1:30 PM- 3:15 PM

/ Convention Center, 144C

Event Description:

This session features advances in freight modeling spanning railroad, waterway, highway, and other modes by both private and public sectors. Research around the world with innovative ideas and significant practical implications is presented. Topics covered range from public planning and operations to practitioners' logistics activities. Research involving new information technologies that potentially bring revolutionary changes to the field is particularly welcome.

Presiding Officer(s):

Joseph Chow, New York University (NYU)

Bruce Wang, Texas A&M Transportation Institute

Sponsored By:

Standing Committee on Freight Transportation Planning and Logistics (AT015)

Event 252

Urban Freight Innovations, Poster | Spotlight Theme

Tuesday, January 12, 2016
2:00 PM- 3:45 PM

Convention Center, Hall E

Event Description:

Recent years have witnessed increased concern for urban freight transport because of the concentration of urban population and the negative externalities produced by freight movement. In a complex urban setting, coordinating freight movement needs into planning and management practices while reducing emissions and fuel consumption has become more and more challenging. This session showcases innovation, best practices, and the latest research in urban and regional freight transportation.

Presiding Officer(s):

Qian Wang, University at Buffalo

Sponsored By:

Standing Committee on Urban Freight Transportation (AT025)

Session 649

Compaction and Modulus Evaluation of Subgrade and Unbound Pavement Layers and Mechanically Stabilized Earth Walls, Poster

Tuesday, January 12, 2016
2:00 PM- 3:45 PM

Convention Center, Hall E

Presiding Officer(s):

Paola Bandini, New Mexico State University

Sponsored By:

Standing Committee on Geotechnical Instrumentation and Modeling (AFS20)

Presentation(s):

Development of an Acceptance Criterion for Compaction of Unbound Pavement Layers Using the Dynamic Cone Penetrometer

/ **Ayman Ali**, Rowan University

/ **Janine Abyad**, Rowan University

/ **Yusuf Mehta**, Rowan University

/ **Manuel Celaya**, Advanced Infrastructure Design

Session 653

Cementitious Stabilization, Poster

Tuesday, January 12, 2016
2:00 PM- 3:45 PM

Convention Center, Hall E

Event Description:

This session features a variety of topics related to the cementitious stabilization of soils including new stabilization additives, new applications for traditional additives, and the investigation and treatment of soils with very high liquid limits and swell potential.

Presiding Officer(s):

Sulapha Peethamparan, Clarkson University

Sponsored By:

Standing Committee on Cementitious Stabilization (AFS80)

Standing Committee on Mineral Aggregates (AFP70)

Standing Committee on Chemical, Mechanical, and Asphalt Stabilization (AFS90)

Session 657

Transformative Trends in Transit Data Analysis, Poster

Tuesday, January 12, 2016
2:00 PM- 3:45 PM

Convention Center, Hall E

Event Description:

The transit industry has made great strides producing new forms of data as an outcome of operational and communication advancements (e.g., automatic passenger counters, automatic vehicle location, Global Positioning System, automated farebox collection, smart cards). This session focuses on the generation, processing, and emerging opportunities for integrating existing and emerging transit data streams with other data sets to tackle issues facing the transit industry.

Presiding Officer(s):

Catherine Lawson, State University of New York, Albany

Sponsored By:

Public Transportation Group (AP000)

Presentation(s):

Assessment of an Adaptive Driving Beam Headlighting System: Visibility and Glare

- / **John Bullough**, Rensselaer Polytechnic Institute (RPI)
- / **Nicholas Skinner**, Rensselaer Polytechnic Institute (RPI)
- / **Timothy Plummer**, Rensselaer Polytechnic Institute (RPI)

Session 667

Transit Fare Issues: Discounts, Equity, and Evasion, Poster

Tuesday, January 12, 2016
2:00 PM- 3:45 PM

Convention Center, Hall E

Presiding Officer(s):

Candace Brakewood, City College of New York

Sponsored By:

Standing Committee on Public Transportation Marketing and Fare Policy (AP030)

Session 668

Transit Fare Policy, Collection, and Impacts, Poster

Tuesday, January 12, 2016
2:00 PM- 3:45 PM

Convention Center, Hall E

Presiding Officer(s):

Jeffrey Busby, TransLink

Sponsored By:

Standing Committee on Public Transportation Marketing and Fare Policy (AP030)

Presentation(s):

Nonadditive Public Transit Fare Pricing Under Congestion with Policy Lessons from Toronto Case Study

- / **Anchor Chin**, Ryerson University
- / **Andy Lai**, Ryerson University
- / **Joseph Chow**, New York University (NYU)

Planning for New Fare Payment Systems: Equity Analysis of Smartphone, Credit Card, and Potential Mobile Ticketing Adoption by Bus Riders in Nassau County, New York

- / **Jake Sion**, Veolia Transportation Services, Inc.
- / **Candace Brakewood**, City College of New York
- / **Omar Alvarado**, Veolia Transdev

Session 670

Automated Transit and Shared Mobility, Poster

Tuesday, January 12, 2016
2:00 PM- 3:45 PM

Convention Center, Hall E

Event Description:

This session presents papers focusing on multimodal shared mobility, autonomous vehicle assistance, and design of a fully automated transit network.

Presiding Officer(s):

Nadereh Moini, New Jersey Sports & Exposition Authority

Sponsored By:

Standing Committee on Automated Transit Systems (AP040)

Presentation(s):

Mirage or Promised Land? Personal Rapid Transit Development and Lessons Learned for Automated Vehicles Today

/ **Rongfang Liu**, New Jersey Institute of Technology

Session 674

Millennials and Our Connected Multimodal Future, Part 2: Future Directions for Transportation Practice, Lectern | Spotlight Theme

Tuesday, January 12, 2016
3:45 PM- 5:30 PM

Convention Center, 103B

Event Description:

As Part 2 of a two-part program, this event will feature a panel of international experts and young researchers who will discuss the implications of millennial travel trends for transportation practice. How will millennial travel behavior change the future practice of planning, design, and operations?

Presiding Officer(s):

Alison Conway, City College of New York

Sponsored By:

Young Members Council (YMC) (A0040T)

Session 684

Reducing Energy Consumption, Carbon Emissions, and Criteria Pollutants from Heavy-Duty Vehicles: Integrated Technology and Policy Approaches, Lectern | AICP Certification

Tuesday, January 12, 2016
3:45 PM- 5:30 PM

Convention Center, 146A

Event Description:

This session responds to the growing need of researchers and practitioners to understand new approaches to addressing three important aspects of the heavy-duty vehicle sector: (a) improving energy efficiency, (b) reducing carbon emissions, and (c) reducing local air pollutants. The session will be integrative, providing new insights into the technologies, policies, and analytical tools related to energy use and emissions in this increasingly important transportation sector.

Presiding Officer(s):

James Winebrake, Rochester Institute of Technology (RIT)

Sponsored By:

Standing Committee on Transportation Energy (ADC70)
Special Task Force on Climate Change and Energy (A0020T)
Standing Committee on Environmental Analysis in Transportation (ADC10)
Standing Committee on Transportation and Air Quality (ADC20)
Standing Committee on Alternative Transportation Fuels and Technologies (ADC80)

Presentation(s):

Greenhouse Gas Emissions Standards, Fuel Efficiency, and the Rebound Effect

/ **Michael Shelby**, U.S. Environmental Protection Agency

/ **James Winebrake**, Rochester Institute of Technology (RIT)

Heavy-Duty Vehicle Logistics and Freight Demand Policies

/ **Jose Holguin-Veras**, Rensselaer Polytechnic Institute (RPI)

Session 685

Housing, Transit-Oriented Development, and Mobility

Tuesday, January 12, 2016
3:45 PM- 5:30 PM

Convention Center, 140B

Presiding Officer(s):

Michael Smart, Rutgers, The State University of New Jersey

Sponsored By:

Standing Committee on Social and Economic Factors of Transportation (ADD20)

Presentation(s):

Quantifying Effects of Residential Property Markets and International Migration on Trip Rates in Britain

- / Esra Suel, Imperial College London
- / Reza Toloeui, AECOM
- / Scott Le Vine, SUNY New Paltz / Imperial College
- / Paul Hanson, Atkins North America
- / John Polak, Imperial College London

Session 689

Current Concrete Bridge Topics, Lectern

Tuesday, January 12, 2016
3:45 PM- 5:30 PM

Convention Center, 207A

Presiding Officer(s):

Hussam Fallaha, SDR Engineering Consultants, Inc.

Sponsored By:

Standing Committee on Concrete Bridges (AFF30)

Presentation(s):

Structural Redundancy of Prestressed Concrete Box-Girder Bridges

- / Jian Yang, City College of New York
- / O. Murat Hamutcuoglu, HNTB Corporation
- / Yingsheng Ni, Tongji University
- / Michel Ghosn, City University of New York (CUNY)

Session 699

Road Illumination, Signage, and Visibility, Lectern

Tuesday, January 12, 2016
3:45 PM- 5:30 PM

Convention Center, 140A

Event Description:

The presenters in this session will discuss recent research results pertaining to visibility and safety-related impacts of road lighting and road signage.

Presiding Officer(s):

John Bullough, Rensselaer Polytechnic Institute (RPI)

Sponsored By:

Standing Committee on Visibility (AND40)

Session 667

Transit Fare Issues: Discounts, Equity, and Evasion, Poster

Tuesday, January 12, 2016
2:00 PM- 3:45 PM

Convention Center, Hall E

Presiding Officer(s):

Candace Brakewood, City College of New York

Sponsored By:

Standing Committee on Public Transportation Marketing and Fare Policy (AP030)

Session 701

Emerging Benefits from Transit Data, Lectern

Tuesday, January 12, 2016
3:45 PM- 5:30 PM

Convention Center, 144A

Event Description:

New sources and uses of data promise to provide a wealth of new benefits to transit operations and planning. This session includes use of automatic vehicle location (AVL) data to estimate demand models; use of Wi-Fi signals to create transit route-level origin-destination flows; inference of transit access from smart card and transaction data; and the creation of a bus network microsimulation using general transit feed specification (GTFS) data and tap-in-only smart card data.

Presiding Officer(s):

Catherine Lawson, State University of New York, Albany

Sponsored By:

Public Transportation Group (AP000)

Session 703

Starting Over: The Challenge of Sustaining Passenger Rail Performance and Restoring Discontinued Services, Lectern

Tuesday, January 12, 2016
3:45 PM- 5:30 PM

Convention Center, 144B

Event Description:

This session features papers and presentations offering new perspectives on the issues encountered in restoring discontinued services and sustaining the quality of legacy operations.

Presiding Officer(s):

Walter Zullig, presiding

Sponsored By:

Standing Committee on Commuter Rail Transportation (AP070)

Presentation(s):

Commuter-Style Interurban Railways and Modern Regional Transit: Rise, Fall and Reuse

/John Allen

/Herbert Levinson

What Happened to Speed? Scheduled Speeds of North American Passenger Trains, 1965-2015

/John Allen

/Herbert Levinson

Session 711

Transportation Planning Applications: Models, Data, and More (21), Poster

Tuesday, January 12, 2016
4:15 PM- 6:00 PM

Convention Center, Hall E

Event Description:

This session presents papers focusing on multimodal shared mobility, autonomous vehicle assistance, and design of a fully automated transit network.

Presiding Officer(s):

Erin Morrow, Metropolitan Washington Council of Governments

Sponsored By:

Standing Committee on Transportation Planning Applications (ADB50)

Presentation(s):

Analysis of Trends and Seasonal Variations in Toll Traffic Demand on Bridges and Tunnels in New York City

/ **Agyenim Oti**

/ **Camille Kamga**, City College of New York

Session 712

Transportation and Land Development (16), Poster

Tuesday, January 12, 2016
4:15 PM- 6:00 PM

Convention Center, Hall E

Presiding Officer(s):

John Renne, University of New Orleans

Sponsored By:

Standing Committee on Transportation and Land Development (ADD30)

Session 725

Surface Transportation Weather and Its Effects on Traffic Networks, Poster

Tuesday, January 12, 2016
4:15 PM- 6:00 PM

Convention Center, Hall E

Event Description:

From avalanches to visibility, from mobile sensors to static sensors, and from traffic speeds to work zone safety, weather affects not only the driver but also the roadway. This session covers many aspects of surface transportation weather.

Presiding Officer(s):

Cristian Druta, Virginia Tech Transportation Institute

Sponsored By:

Standing Committee on Surface Transportation Weather (AH010)

Presentation(s):

Measuring Freeway Route Travel Time Distributions Under Inclement Weather

/ **Hernan Caceres Venegas**

/ **Ha Hwang**, University at Buffalo

/ **Qing He**, University at Buffalo

Session 747

Parking and the City, Lectern

/// Wednesday, January 13, 2016
8:00 AM- 9:45 AM

/// Convention Center, 150B

Event Description:

This session will feature fast-paced presentations from different states on how to use innovative methods for getting recently developed technologies and procedures into the hands of transportation practitioners. The focus will be on practical methods pioneered by Local Technical Assistance Programs. Examples include smartphone apps for guidelines on installation and maintenance, self-paced online training, YouTube videos, circuit training, and operational research assistance to encourage practitioner innovations.

Presiding Officers:

Rachel Weinberger, Nelson\Nygaard Consulting Associates

Sponsored By:

Standing Committee on Transportation Demand Management (ABE50)
Subcommittee on Parking Management (ABE50(1))

Presentation(s):

More Than One Way to.... Transfer Knowledge to Field Crews

- /// **Jingqin Gao**, New York University (NYU)
- /// **Kaan Ozbay**, New York University (NYU)

Session 749

New Approaches for Urban Data, Lectern

/// Wednesday, January 13, 2016
8:00 AM- 9:45 AM

/// Convention Center, 154

Presiding Officer(s):

Mecit Cetin, Old Dominion University

Sponsored By:

Standing Committee on Urban Transportation Data and Information Systems (ABJ30)

Presentation(s):

Data Fusion and Information Integration for Fine-Grained Arterial Traffic Modeling

- /// **Zhanbo Sun**, Western Michigan University
- /// **Peng Hao**, University of California, Riverside
- /// **Xuegang Ban**, Rensselaer Polytechnic Institute (RPI)

Session 770

TRB Special Report 319, Between Public and Private Mobility: Examining the Rise of Technology-Enabled Transportation Services, Lectern | Spotlight Theme

/// Wednesday, January 13, 2016
8:00 AM- 9:45 AM

/// Convention Center, 144C

Event Description:

Representatives of the Committee for Review of Innovative Urban Mobility Services will present and discuss finding and recommendations from the forthcoming TRB Special Report 319, Between Public and Private Mobility: Examining the Rise of Technology-Enabled Transportation Services, and subject-matter experts will provide comments. The session will include audience discussion, including invited remarks from Uber and Lyft representatives.

Presiding Officer(s):

Caroline Rodier, University of California, Davis

Sponsored By:

Standing Committee on Emerging and Innovative Public Transport and Technologies (AP020)

Presentation(s):

Possible Economic Effects of TNCs

- /// **Michael Manville**, Cornell University
- /// **Timothy Papandreou**, San Francisco Municipal Transportation Agency

Session 773

Transportation Infrastructure and Efficient Intermodal Freight Movement, **Lectern**

Wednesday, January 13, 2016
8:00 AM- 9:45 AM

Convention Center, 143C

Presiding Officer(s):

MD Sarder, University of Southern Mississippi

Sponsored By:

Standing Committee on Intermodal Freight Transport (AT045)

Presentation(s):

Estimation of an Origin-Destination Table for U.S. Imports of Waterborne Containerized Freight

- /Hao Wang, Cornell University
- /Jared Gearhart, Sandia National Laboratories
- /Katherine Jones, Sandia National Laboratories
- /Christopher Frazier, Sandia National Laboratories
- /Linda Nozick, Cornell University
- /Brian Levine, New York City Transit
- /Dean Jones, Sandia National Laboratories

Session 776

Current Research on the Marine Environment: Liquefied Natural Gas as Marine Fuel, **Lectern**

Wednesday, January 13, 2016
8:00 AM- 9:45 AM

Convention Center, 144A

Presiding Officer(s):

Lena DeSantis, Anchor QEA

Sponsored By:

Standing Committee on Marine Environment (AW030)

Presentation(s):

Natural Gas as a Marine Fuel

- /James Winebrake, Rochester Institute of Technology (RIT)

Structural Fiber Reinforced Polymers Committee

Wednesday, January 13, 2016
8:00 AM- 12:00 PM

Marriott Marquis, Scarlet Oak (Mezz)

Presiding Officer(s):

Wael Zatar, Marshall University

Sponsored By:

Standing Committee on Structural Fiber Reinforced Polymers (AFF80)

Presentation(s):

Domestic Scan: Advances in FRP Composites

- /Jamal Elkaissi, Federal Highway Administration (FHWA)
- /Jerome O'Connor, University at Buffalo

Session 777

Transportation Economics Topics: Cost-Benefit Analysis, Pricing, Mileage-Based User Fees, Elasticities, and More, **Poster**

Wednesday, January 13, 2016
8:30 AM- 10:15 AM

Convention Center, Hall E

Event Description:

This poster session includes the best papers submitted to the transportation economics committee and covers a wide range of transportation economic issues. Also included are the best posters from a call for posters that highlight projects where sound economic analysis (such as a benefit-cost analysis) was used to help with project selection. The objective is to share and discuss research findings and case studies that identify best practices and promote the use of economic analysis in the decision-making process.

Presiding Officer(s):

Mark Burris, Texas A&M Transportation Institute

Sponsored By:

Standing Committee on Transportation Economics (ABE20)

Presentation(s):

Analyses Considering Partner Selection and Joint Decision Making: Investigation of Freight Demand with Spatial Matching Models

- /Dapeng Zhang, Rensselaer Polytechnic Institute (RPI)
- /Xiaokun Wang, Rensselaer Polytechnic Institute (RPI)

Session 782

Vehicle Ownership and Usage (13), Poster

Wednesday, January 13, 2016
8:30 AM- 10:15 AM

Convention Center, Hall E

Presiding Officer(s):

Kathleen Deutsch-Burgner, Data Perspectives Consulting

Sponsored By:

Standing Committee on Traveler Behavior and Values (ADB10)

Presentation(s):

Assessing Competing Explanations for the Decline in Driving

- /David King, Columbia University
- /Michael Manville, Cornell University
- /Michael Smart, Rutgers, The State University of New Jersey

Session 783

Time Use and Activity Patterns (20), Poster

Wednesday, January 13, 2016
8:30 AM- 10:15 AM

Convention Center, Hall E

Presiding Officer(s):

Abolfazl Mohammadian, University of Illinois, Chicago

Sponsored By:

Standing Committee on Traveler Behavior and Values (ADB10)

Presentation(s):

Pattern Recognition and Personal Travel Behavior

- /Mahdieh Allahviranloo, City College of New York

A Comparison of Time-Use Behavior in Metropolitans Using Pattern Segmentation Techniques

- /Mahdieh Allahviranloo, City College of New York
- /Leila Aissaoui, Ecole Nationale des Travaux Public de l'Etat

Session 785

Travel Demand Models R Us (59), Poster

Wednesday, January 13, 2016
8:30 AM- 10:15 AM

Convention Center, Hall E

Presiding Officer(s):

Jeremy Raw, Federal Highway Administration (FHWA)

Sponsored By:

Standing Committee on Transportation Demand Forecasting (ADB40)

Presentation(s):

Metro-Based Park-and-Ride Facilities in Guangzhou City, China: Evaluation of Facility Locations and Parking Rate Policy in Central Area

- /Yongzhong Wu, South China University of Technology
- /Jose Holguin-Veras, Rensselaer Polytechnic Institute (RPI)
- /Felipe Aros-Vera, Ohio University

Session 787

TRB Special Report 319, Between Public and Private Mobility: Examining the Rise of Technology-Enabled Transportation Services, Lectern | Spotlight Theme

Wednesday, January 13, 2016
8:30 AM- 10:15 AM

Convention Center, Hall E

Event Description:

These posters were peer-reviewed by the Vehicle-Highway Automation Committee and represent the best of the papers that were submitted for review this year. The selection of posters shows the diversity of the topics that are currently being researched in this emerging topic area.

Presiding Officer(s):

Caroline Rodier, University of California, Davis

Sponsored By:

Standing Committee on Vehicle-Highway Automation (AHB30)

Presentation(s):

Multiobjective Optimization Controller for Cooperative Adaptive Cruise Control

- /Zijia Zhong, New Jersey Institute of Technology
- /Jyoung Lee, New Jersey Institute of Technology
- /Lihui Zhao, New Jersey Institute of Technology

Session 793

Evaluation of Operator Performance in a Simulator, Poster

Wednesday, January 13, 2016
8:30 AM- 10:15 AM

Convention Center, Hall E

Event Description:

This poster session covers a broad range of methods and challenges associated with measuring human operator performance in the simulator.

Presiding Officer(s):

David Hurwitz, Oregon State University

Sponsored By:

Standing Committee on Simulation and Measurement of Vehicle and Operator Performance (AND30)

Presentation(s):

Driving Simulation in Safety and Operation Performance of Freeway Toll Plaza

- /Didier Valdes, University of Puerto Rico, Mayaguez
- /Benjamin Colucci, University of Puerto Rico, Mayaguez
- /Donald Fisher, Office of the Assistant Secretary for Research and Technology (OSTR)
- /Johnathan Ruiz Gonzalez, University of Puerto Rico, Mayaguez
- /Enid Colón Torres, University of Puerto Rico, Mayaguez
- /Ricardo Garcia Rosario, University of Puerto Rico, Mayaguez

Session 803

Logistics of International Humanitarian Relief Efforts in Africa and Nepal, Lectern

Wednesday, January 13, 2016
10:15 AM- 12:00 PM

Convention Center, 146B

Presiding Officer(s):

Jon Meyer, Jon Meyer Associates

Sponsored By:

Standing Committee on the Logistics of Disaster Response and Business Continuity (ABR20)
Standing Committee on Military Transportation (AT035)

Presentation(s):

Nepal Earthquake Relief Support

- /Jose Holguin-Veras, Rensselaer Polytechnic Institute (RPI)

Session 807

Pavement Performance Modeling and Measurement, Lectern

Wednesday, January 13, 2016
10:15 AM- 12:00 PM

Convention Center, 202A

Event Description:

Pavement performance measurement and modeling is a cornerstone of pavement management. Improvements in performance modeling make it possible to obtain better insights into the future condition of a highway network. This session presents innovative techniques and approaches in this area.

Presiding Officer(s):

Raja Shekharan, Virginia Department of Transportation

Sponsored By:

Standing Committee on Pavement Management Systems (AFD10)

Presentation(s):

Three-Stage Least-Squares Analysis of Post-Rehabilitation Pavement Performance

- /Md Tawfiq Sarwar, University at Buffalo
- /Panagiotis Anastasopoulos, University at Buffalo

Session 815

What Does Resilience Mean for Operations and What Do Operations Mean for Resilience?, **Lectern**

/// Wednesday, January 13, 2016
10:15 AM- 12:00 PM

/// Convention Center, 101

Event Description:

A number of recent Executive Orders and Directives set forth policies for strengthening the resilience of critical infrastructure against evolving threats and hazards. Part of this broad resilience effort is to ensure that the transportation network can operate in a resilient manner, including the network's ability to move people and goods before, during, and immediately after extreme weather events. The session will look at critical phases (planning, preparedness, and recovery) of operating the network in support of resilience.

Presiding Officer(s):

Keith McCabe, KAM Futures

Sponsored By:

Standing Committee on Regional Transportation Systems Management and Operations (AHB10)
Standing Committee on Freeway Operations (AHB20)
Standing Committee on Maintenance and Operations Management (AHD10)
Standing Committee on Critical Transportation Infrastructure Protection (ABR10)

Presentation(s):

What Is Resilience?

/// **Thomas Wakeman**, Stevens Institute of Technology

Session 833

SHRP 2 Education Connection, Part 2: Incorporating SHRP 2 Solutions into University Curricula, **Lectern**

/// Wednesday, January 13, 2016
2:30 PM- 4:00 PM

/// Convention Center, 152B

Event Description:

This session will include presentations by four university professors selected to receive FHWA Education Connection grants to develop lesson plans, case studies, or other learning opportunities that integrate SHRP 2 Solutions into their curricula. The session will explore the different types of methods used by instructors and their effectiveness in engaging students. A companion poster session will feature strategies of all grant recipients.

Presiding Officer(s):

Joseph Conway, Federal Highway Administration (FHWA)

Sponsored By:

Standing Committee on Technology Transfer (ABG30)
Standing Committee on Transportation Education and Training (ABG20)

Presentation(s):

Integration of SHRP 2 Products in the Civil Engineering Curriculum at Rowan University

/// **Yusuf Mehta**, Rowan University

Session 835

Perspectives on the Future of the Commodity Flow Survey: Findings from the Commodity Flow Survey Session, **Lectern** | AICP Certification

/// Wednesday, January 13, 2016
2:30 PM- 4:00 PM

/// Convention Center, Salon A

Presiding Officer(s):

Alison Conway, City College of New York

Sponsored By:

Standing Committee on Freight Transportation Data (ABJ90)

Presentation(s):

Rensselaer Polytechnic Institute Perspective on the Future of the Commodity Flow Survey

/// **Jose Holguin-Veras**, Rensselaer Polytechnic Institute (RPI)

Session 854

Route Choice and Traffic Equilibrium (12), Poster / Wednesday, January 13, 2016 8:30 AM- 10:15 AM / Convention Center, Hall E

Presiding Officer(s):

Song Gao, University of Massachusetts, Amherst

Sponsored By:

Standing Committee on Transportation Network Modeling (ADB30)
 Standing Committee on Traveler Behavior and Values (ADB10)

Presentation(s):

Nonlinear-Expectation Risk-Averse User Equilibrium on Stochastic Traffic Networks

- /Xiangfeng Ji, Southeast University
- /Xuegang Ban, Rensselaer Polytechnic Institute (RPI)
- /Mengtian Li, Southeast University
- /Jian Zhang, Southeast University
- /Bin Ran, University of Wisconsin, Madison

Session 855

Transportation Network Modeling (60), Poster / Wednesday, January 13, 2016 2:45 PM- 4:30 PM / Convention Center, Hall E

Presiding Officer(s):

Elise Miller-Hooks, University of Maryland

Sponsored By:

Standing Committee on Transportation Network Modeling (ADB30)

Presentation(s):

Beyond Distribution: Realistic Assessment of System-Wide Travel Time reliability in the Stochastic Traffic Network (16-3023)

- /Xiangfeng Ji, Southeast University
- /Xuegang Ban, Rensselaer Polytechnic Institute (RPI)
- /Mengtian Li, Southeast University
- /Jian Zhang, Southeast University
- /Bin Ran, Southeast University

Session 861

Travel Behavior and Advanced Vehicle Technology, Lectern / Wednesday, January 13, 2016 4:30 PM- 6:00 PM / Convention Center, 145A

Event Description:

Pavement performance measurement and modeling is a cornerstone of pavement management. Improvements in performance modeling make it possible to obtain better insights into the future condition of a highway network. This session presents innovative techniques and approaches in this area.

Presiding Officer(s):

Maren Outwater, RSG

Sponsored By:

Standing Committee on Traveler Behavior and Values (ADB10)

Presentation(s):

Household Activity and Travel Patterns with Autonomous Vehicles: In-vehicle Activity Decisions

- /Roger Chen, Rochester Institute of Technology (RIT)
- /William Armington, Rochester Institute of Technology (RIT)

Session 867

The Future of Toll Financing and Its Policy Ramifications, Workshop

Thursday, January 14, 2016
8:00 AM- 12:00 PM

Convention Center, 101

Event Description:

The focus is to identify more optimal ways to share the revenue risks between public agencies and private developers, topics that are also relevant for public agencies seeking to issue toll road revenue bonds for new projects.

Presiding Officers:

James Bass, Texas Department of Transportation

Sponsored By:

Standing Committee on Revenue and Finance (ABE10)

Standing Committee on Congestion Pricing (ABE25)

Presentation(s):

Part 1: Technical and Academic Issues

/ **Raymond Tillman**, RT Consultancy

/ **Sasha Page**, IMG Rebel

/ **Eduardo Engel**, Universidad de Chile

/ **Jose Manuel Vassallo**, Universidad Politecnica de Madrid

/ **Raymond Geddes**, Cornell University

Session 868

Freight Transport and Logistics in the Developing Countries: Challenges and Possible Solutions, Workshop

Thursday, January 14, 2016
8:00 AM- 12:00 PM

Convention Center, 102B

Event Description:

There are enormous challenges to efficient freight movement in the developing countries: lack of specific policies and programs to increase efficiency, lack of separation of slow traffic, lack of sufficient transport capacity, and, more important, a lack of safe-transport regulations and enforcement. The primary objective of this Session is to highlight these challenges and discern a path to higher efficiencies for freight transport in developing countries.

Presiding Officer(s):

Om Agarwal, The World Bank

Rafael Aldrete, Texas A&M Transportation Institute

Sponsored By:

Standing Committee on Transportation in the Developing Countries (ABE90)

Standing Committee on Transportation Energy (ADC70)

Presentation(s):

Urban Freight Transport Initiatives in the Developing Countries

/ **Jose Holguin-Veras**, Rensselaer Polytechnic Institute (RPI)

Session 873

Health Effects of Transportation Noise and Air Quality and Mitigation Strategies, Session | AICP Certification

Thursday, January 14, 2016
8:00 AM- 12:00 PM

Convention Center, 209B

Event Description:

There are enormous challenges to efficient freight movement in the developing countries: lack of specific policies and programs to increase efficiency, lack of separation of slow traffic, lack of sufficient transport capacity, and, more important, a lack of safe-transport regulations and enforcement. The primary objective of this Session is to highlight these challenges and discern a path to higher efficiencies for freight transport in developing countries.

Presiding Officer(s):

James Cowan, AECOM
Ke Zhang, Cornell University
Roger Wayson, Wyle Laboratories, Inc.

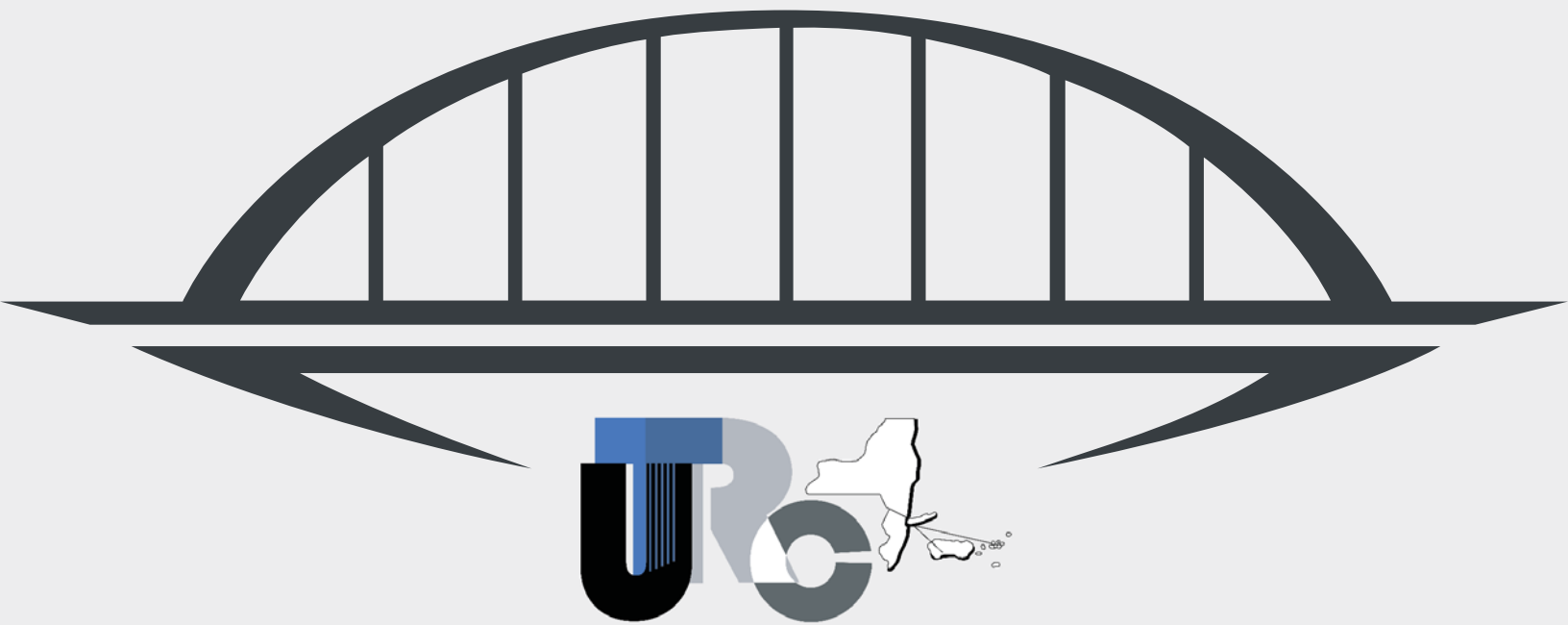
Sponsored By:

Standing Committee on Transportation-Related Noise and Vibration (ADC40)
Standing Committee on Transportation and Air Quality (ADC20)

Presentation(s):

Air Quality – Spatial Variations of Noise and Air Pollution Levels Behind Noise Barriers

/ **Jiajun Gu**, Cornell University
/ **Bo Yang**, Cornell University
/ **Ke Zhang**, Cornell University



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