

# UTRC FACULTY

JANUARY 11-15

AT 94TH TRB  
ANNUAL MEETING

2015

UNIVERSITY TRANSPORTATION RESEARCH CENTER - REGION 2



Papers and  
Presentations by  
Date and Time

Transportation Research Board 94th Annual Meeting

JANUARY 11-15, 2015 • WASHINGTON D.C.





THIS DOCUMENT ASSEMBLES THE SESSIONS IN WHICH UTRC FACULTY AND STAFF WILL BE PRESENTING AT THE TRANSPORTATION RESEARCH BOARD (TRB) 94TH 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
- Rutgers University\*
- State University of New York
- Stevens Institute of Technology
- Syracuse University
- The College of New Jersey
- University of Puerto Rico

\*Member under SAFETEA-LU

**Registration is required for all Annual Meeting attendees, including those who register to attend any workshop, visit the exhibits, or take advantage of services provided onsite. Register at: [www.trb.org](http://www.trb.org)**



Sunday

# 01/11/15

## Workshop 113

**Event Title:**

Interactive Communication About Complex Concepts

**Event Date:**

Sunday, January 11, 2015  
9:00AM - 12:00PM

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**Presiding Officers:**

Joanne Waszczak, Federal Transit Administration, presiding  
Rusty Ennemoser, Florida Department of Transportation, presiding

**Sponsored By:**

Transportation Planning for Small and Medium-Sized Communities (ADA30)  
Public Involvement in Transportation (ADA60)

**Event Description:**

Transportation plans and projects can be very complex, involving a wide array of policies, demographics, data sets, and tools. Transportation professionals in communities of all sizes are eager to find interactive ways to engage the public. This workshop introduces storytelling and graphics as ways to create effective dialogue on complex topics. We will share ideas for long-range planning, project prioritization, business corridor plans, bicycle and transit plans and road usage charges.

**Presentations:**

**Keynote: Open Plans and Story Maps--Creating Virtual Spaces for Community Engagement**

Laxmi Ramasubramanian, Hunter College

## Workshop 143

**Event Title:**

Influence of Airfield Surface Irregularity on Aircraft Life

**Event Date:**

Sunday, January 11, 2015  
9:00AM - 12:00PM

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**Presiding Officers:**

João Merighi, Engineering Research Institute Pesquisas Ltda., presiding  
Waheed Uddin, University of Mississippi, presiding

**Sponsored By:**

Aircraft/Airport Compatibility (AV070)

**Event Description:**

Design issues related to the safety and security of aircraft during takeoff and landing operations are reviewed by examining the impact of surface irregularities, ponding, and the amplitude and wavelength of the pavement longitudinal profile. How can it affect the life of the main gear and consequently the aircraft safety and security? Potential moderators and speakers are aircraft industries experts, airport pavement asset managers, FAA, other agencies, and academics.

**Presentations:**

**Airfield Flexible Pavement Responses under Heavy Aircraft and High Tire Pressure Loading**

Hao Wang, Rutgers University

Maoyun Li, Rutgers University

Navneet Garg, FAA William J. Hughes Technical Center

## Event Title:

Urban Streets Subcommittee,  
AHB40(3.3)

## Event Date:

Sunday, January 11, 2015  
1:30PM - 2:45PM

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## Presiding Officers:

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

## Sponsored By:

Highway Capacity and Quality of Service (AHB40)

## Workshop 178

## Event Title:

The Present and Future of Speed  
Limits in a Toward Zero Deaths  
(TZD) Framework

## Event Date:

Sunday, January 13, 2013  
1:30PM - 4:30PM

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## Presiding Officers:

Hillel Bar-Gera, Ben Gurion University of the Negev, Israel, presiding  
Libby Thomas, University of North Carolina, Chapel Hill, presiding

## Sponsored By:

Transportation Network Modeling (ADB30)  
Transportation Safety Management (ANB10)  
Safety Data, Analysis and Evaluation (ANB20)  
Traffic Speed and Safety - Cross-cutting Issues (ANB20(5))

## Event Description:

Speed limit setting raises many issues relevant to a TZD National Highway Safety Strategy: balancing safety and mobility, estimating and disseminating safety and mobility impacts, accommodating inputs from all stakeholders, effects of design and enforcement, credibility of limits, emerging vehicle types, etc. This workshop explores current methods of setting speed limits in the United States and internationally, how various issues are addressed by each method, and what the future needs may be.

## Presentations:

### Engineering and Expert Methods of Setting Speed Limits

Raghavan Srinivasan, University of North Carolina, Chapel Hill

## Workshop 189

## Event Title:

Critical Infrastructure—From Protection to Resilience: An Evolution to Meet the New Threats

## Event Date:

Sunday, January 13, 2013  
1:30PM - 4:30PM

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## Presiding Officers:

John M. Contestabile, Johns Hopkins University Applied Physics Laboratory, presiding  
Jon S. Meyer, Meyer Associates, presiding  
Laurel J. Radow, Federal Highway Administration, presiding

## Sponsored By:

Critical Transportation Infrastructure Protection (ABE40)  
Logistics of Disaster Response and Business Continuity (AT065)

## Event Description:

This workshop examines how the 12 years of critical infrastructure protection-related research since 9/11 prepares us for the new threat environment. The workshop summarizes research already undertaken and examines research that will need to be considered in adapting to the ever-changing threats faced now and in the future. Three panels explore past efforts and focus areas, the current threats, and anticipated future research in light of the relatively new concept of resilience.

## Presentations:

### Panel 3: TRB Evolving to address Resilience, Reliability and Response to Disasters

Thomas H. Wakeman, Stevens Institute of Technology  
John M. Contestabile, Johns Hopkins University Applied Physics Laboratory  
Jon S. Meyer, Meyer Associates  
Brian Wolshon, Louisiana State University

**Event Title:**

Welcome and Attendee Orientation Session

**Event Date:**

Sunday, January 13, 2013  
2:30PM - 4:00PM

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**Presiding Officers:**

Robert E. Skinner, Transportation Research Board, presiding

**Sponsored By:**

Technical Activities (A0000)

**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.

**Presentations:****Opportunities for Young Participants**

Alison J. Conway, City College of New York

**Event Title:**

Joint Meeting of the Freight Systems and Marine Group Executive Boards

**Event Date:**

Sunday, January 11, 2015  
5:30PM - 8:00PM

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**Presiding Officers:**

Thomas H. Wakeman, Stevens Institute of Technology, presiding  
Barbara Ivanov, Washington State Department of Transportation, presiding

**Sponsored By:**

Freight Systems Group (AT000)  
Marine Group (AW000)

**Event Title:**

Young Professionals Reception

**Event Date:**

Sunday, January 11, 2015  
9:00PM - 10:30PM

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**Presiding Officers:**

Alison J. Conway, City College of New York, presiding

**Sponsored By:**

Young Members Council (YMC) (A0040T)

**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.

Monday

# 01/12/15

## Session 203

**Event Title:**

Advances in Traffic Assignment and Equilibrium

**Event Date:**

Monday, January 12, 2015  
8:00AM - 9:45AM

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**Presiding Officers:**

David Hunt, Oliver Wyman, presiding

**Sponsored By:**

Transportation Network Modeling (ADB30)

**Presentations:**

**Modeling Mixed Equilibria in Transportation Networks with Link Constraints**

Xia Yang, Rensselaer Polytechnic Institute

Rui Ma, University of California, Davis

Xuegang (Jeff) Ban, Rensselaer Polytechnic Institute

## Session 212

**Event Title:**

Topics in Design and Rating of Concrete Bridges

**Event Date:**

Monday, January 12, 2015  
8:00AM - 9:45AM

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**Presiding Officers:**

Dennis R. Mertz, University of Delaware, presiding

**Sponsored By:**

Concrete Bridges (AFF30)

**Event Description:**

This session includes papers on topics relative to design or rating of concrete bridges. Topics include evaluation of redundancy factors, live load distribution factors for skewed multi-cell box girders, and consideration of slenderness effects in rating concrete arch bridges.

**Presentations:**

**System Factors for Evaluating the Redundancy of Bridge Systems under Vertical Load**

Jian Yang, City College of New York

Michel Ghosn, City College of New York

**System Factors for Evaluating the Redundancy of Bridge Systems under Lateral Load**

Jian Yang, City College of New York

Michel Ghosn, City College of New York

## Session 223

**Event Title:**

Transformative Applications of Transit Data

**Event Date:**

Monday, January 12, 2015  
8:00AM - 9:45AM

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**Presiding Officers:**

Catherine Theresa Lawson, State University of New York, Albany, presiding

**Sponsored By:**

Public Transportation Group (AP000)

Public Transportation Planning and Development (AP025)

Bus Transit Systems (AP050)

Transformative Transit Data (AP000(3))

**Event Description:**

Recent advances in technology have produced many new forms of transit data. These data are emerging from a variety of sources such as Automatic Passenger Counters, Automatic Vehicle Location, Automatic Fare Collection, General Transit Feed Specification, social media, etc. This data is being shaped, mined and integrated to transform it into information providing new insights into traveler behavior, but also leading to new applications in transit planning and management.

## Session 225

**Event Title:**

Designing for LRT Success

**Event Date:**

Monday, January 12, 2015  
8:00AM - 9:45AM

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**Presiding Officers:**

Jason Lee, San Francisco Municipal Transportation Agency, presiding

**Sponsored By:**

Light Rail Transit (AP075)

**Event Description:**

Rarely do planners tie transit operating and investment strategies to long range regional objectives, such as increasing transit modal share by 10% over a 30 year period. The lead off paper in this session presents a method for doing that. The following papers analyze light rail performance to determine what variables contribute to favorable or unfavorable operating results.

**Presentations:****Fill the Gap between Light Rail Service and Riders' Move Choice:****Evidence from Hudson-Bergen Light Rail**

Xiaobo Liu, Southwest Jiaotong University, China

Yi Deng, Parsons

You-Lian Chu, Parsons

Rongfang Liu, NJIT & Yilin Li, Southwest Jiaotong University

## Session 233

**Event Title:**

Transportation Funding  
and Financing Showcase

**Event Date:**

Monday, January 12, 2015  
8:30AM - 10:15AM

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**Presiding Officers:**

Jennifer R. Mayer, Ernst and Young, presiding

**Sponsored By:**

Revenue and Finance (ABE10)

Public-Private Partnerships (ABE10(1))

**Event Description:**

This poster session highlights research in the area of transportation funding and financing, including revenue tools and public-private partnership activities.

**Presentations:****Flat Versus Spatially Variable Tolling: Case Study in Fresno, California**

Omid M. Rouhani, Cornell University

Deborah Niemeier, University of California, Davis

H. Oliver Gao, Cornell University

Raymond Richard Geddes, Cornell University

**Toll Price Elasticities of Demand for Toll Bridges and Tunnels in New York City**

Dan Wan, City University of New York

Camille Kamga, City College of New York

Anil Yazici, Stony Brook University

**Event Title:**

Climate Change  
and Energy Task Force

**Event Date:**

Monday, January 12, 2015  
10:15AM - 12:00PM

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**Presiding Officers:**

Robert B. Noland, Rutgers University, presiding

**Sponsored By:**

Special Task Force on Climate Change and Energy (A0020T)



## Session 266

**Event Title:**

What's Going on in Local Mixed-Use and TOD Environments

**Event Date:**

Monday, January 12, 2015  
10:15AM - 12:00PM

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**Presiding Officers:**

John L. Renne, University of New Orleans, presiding

**Sponsored By:**

Transportation and Land Development (ADD30)

**Presentations:**

**Repeal of Minimum Parking Requirements in the Green Code in Buffalo: New Directions for Land Use and Development**

Daniel Baldwin Hess, State University of New York, Buffalo

## Session 274

**Event Title:**

Rapid Asphalt Pavement Construction

**Event Date:**

Monday, January 12, 2015  
10:15AM - 12:00PM

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**Presiding Officers:**

Frank Fee, Asphalt Pavement Technology, LLC, presiding

**Sponsored By:**

General Issues in Asphalt Technology (AFK10)

**Event Description:**

This session will review the overall management of Accelerated Asphalt Pavement Construction – from its inception to the final completion. It will also include some detailed examples of the exceptional approaches used to make this happen. In addition, some intangible aspects (e.g. sustainability, user delay, special materials, costs and other such issues) will be captured.

**Presentations:**

**I-295 in New Jersey Reconstructed in Record Time by Using Engineered Hot-Mix Asphalt**

Thomas A. Bennert, Rutgers University  
Robert W. Sauber, Consultant

## Session 281

**Event Title:**

Safety Management Data Analytics

**Event Date:**

Monday, January 12, 2015  
10:15AM - 12:00PM

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**Presiding Officers:**

Jake Kononov, DiExSys LLC, presiding

**Sponsored By:**

Transportation Safety Management (ANB10)

**Event Description:**

This session will focus on data driven decision support analysis in safety management using state of the art methods. It will address questions of safety policy and program development.

**Presentations:**

**Why have traffic fatalities dropped in the US?**

Robert B. Noland, Rutgers University  
Feiyang Sun, Cornell University

## Session 297

**Event Title:**

Emerging Ideas in Performance Management

**Event Date:**

Monday, January 12, 2015  
10:45AM - 12:30PM

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**Presiding Officers:**

Tara Lakshmi Ramani, Texas A&M Transportation Institute, presiding

**Sponsored By:**

Performance Measurement (ABC30)

**Presentations:****Characterizing Bridge Functional Obsolescence Using Congestion Performance Measures Determined from Anonymous Probe Vehicle Data**

Andrew Joseph Bechtel, College of New Jersey  
Thomas M. Brennan, College of New Jersey

## Session 302

**Event Title:**

Innovative Analyses of National Household Transportation Survey

**Event Date:**

Monday, January 12, 2015  
10:45AM - 12:30PM

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**Presiding Officers:**

Thera Black, Thurston Regional Planning Council, presiding

**Sponsored By:**

Task Force on Understanding New Directions  
for the National Household Travel Survey (ABJ45T)

**Event Description:**

The goal of this session is to share and learn about innovative applications of the National Household Travel Survey with a focus on studies that use the NHTS with other large, publically available data sets; analyze travel patterns using visualization; characterize long-distance and rural trips; help understand broad public health topics related to transportation and disaster management; analyze transit or active modes; examine environmental issues; or answer questions important to MPOs.

**Presentations:****Freight Deliveries Directly Generated by Residential Units:****Analysis with 2009 NHTS Data**

Yiwei Zhou, Rensselaer Polytechnic Institute  
Xiaokun (Cara) Wang, Rensselaer Polytechnic Institute

**Using NHTS 2001 and 2009 to Analyze Intrapersonal Variability in Travel Behavior**

Ralph Buehler, Virginia Polytechnic Institute and State University  
Andrea Hamre, Virginia Polytechnic Institute and State University

## Session 303

**Event Title:**

Research in Statistical Methods  
in Transportations

**Event Date:**

Monday, January 12, 2015  
10:45AM - 12:30PM

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**Presiding Officers:**

Panagiotis Ch. Anastasopoulos, State University of New York, Buffalo, presiding

**Sponsored By:**

Statistical Methods (ABJ80)

**Presentations:****Bayesian Inference for Network Flow Problems Considering  
Unknown Route Choice Probabilities**

Zhen Tan, Cornell University  
H. Oliver Gao, Cornell University

**Performance Measure of Travel Time Reliability  
of Emergency Vehicles in an Urban Region**

Zhenhua Zhang, University at Buffalo, State University of New York  
Qing He, State University of New York, Buffalo  
Jizhan Gou, Sabra, Wang & Associates, Inc.  
XiaoLing Li, Virginia Department of Transportation

**A Doubly Stochastic Point Process Model for Modeling Crashes along a Corridor**

Sami Demiroglu, Rutgers University  
Kaan Ozbay, New York University

**A Fixed Effects Bivariate Ordered Probit Analysis of Perceived  
and Observed Aggressive Driving Behavior: A Driving Simulation Study**

Nima Golshani, State University of New York, Buffalo  
Panagiotis Ch. Anastasopoulos, State University of New York, Buffalo  
Kevin Hulme, State University of New York, Buffalo

**An Empirical Exploratory Analysis of Factors Affecting Highway Segment Hazard-  
Level Likelihood Using Random Parameters Ordered Probit Regression**

SeyedAta Nahidi, State University of New York, Buffalo  
Nima Golshani, State University of New York, Buffalo  
Panagiotis Ch. Anastasopoulos, State University of New York, Buffalo

## Session 308

**Event Title:**

Advances in Concrete  
for Transportation

**Event Date:**

Monday, January 12, 2015  
10:45AM - 12:30PM

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**Presiding Officers:**

Paul J. Tikalsky, Oklahoma State University, presiding

**Sponsored By:**

Basic Research and Emerging Technologies Related to Concrete (AFN10)

**Presentations:****Elastic Modulus and Poisson's Ratio of Alkali-Activated Cement-Free Concrete**

Robert Thomas, Clarkson University  
Sulapha Peethamparan, Clarkson University

**Strength and Setting Time Enhancement in Alkali-Modified High-Volume  
Fly Ash Binders**

Sulapha Peethamparan, Clarkson University  
Tefamichael Yehdego, Clarkson University

## Session 310

**Event Title:**

Innovations in Concrete Materials and Test Methods

**Event Date:**

Monday, January 12, 2015  
10:45AM - 12:30PM

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**Presiding Officers:**

Tara Cavalline, University of North Carolina, Charlotte, presiding

**Sponsored By:**

Properties of Concrete (AFN20)

**Presentations:****Investigation of High-Performance Concrete Containing Slag Under Restrained Shrinkage Conditions**

Hani H. Nassif, Rutgers University  
John Montemarano, ECI Group LLC  
Chaekuk Na, Rutgers University

## Session 313

**Event Title:**

Concrete and Curing in Mixtures

**Event Date:**

Monday, January 12, 2015  
10:45AM - 12:30PM

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**Presiding Officers:**

Mark E. Felag, Rhode Island Department of Transportation, presiding

**Sponsored By:**

Concrete Materials and Placement Techniques (AFN40)

**Presentations:****Real-Time 3-D Concrete Vibration Effort Tracking and Visualization with Ultra-Wide-Band Technologies**

Jie Gong, Rutgers University  
Yi Yu, Rutgers University  
Trefor P. Williams, Rutgers University  
Andres Roda, Rutgers University

## Session 320

**Event Title:**

Factors Affecting Transit Mode Choice and Ridership

**Event Date:**

Monday, January 12, 2015  
10:45AM - 12:30PM

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**Presiding Officers:**

Brendon Hemily, Hemily and Associates, presiding

**Poster Session | Practice Ready Papers:**

Planning and Forecasting, Public Transportation

**Sponsored By:**

Public Transportation Planning and Development (AP025)

**Presentations:****City Centers and Rapid Transit Ridership**

Sharat Kalluri, CDM Smith  
Herbert Levinson, UTRC

**Event Title:**

Artificial Intelligence and Advanced Computing Applications Committee

**Event Date:**

Monday, January 12, 2015  
1:30PM - 5:30PM

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**Presiding Officers:**

Adel W. Sadek, State University of New York, Buffalo, presiding

**Sponsored By:**

Artificial Intelligence and Advanced Computing Applications (ABJ70)

## Session 347

**Event Title:**

Weather Effects on Roadways

**Event Date:**

Monday, January 12, 2015  
1:30PM - 3:15PM

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**Presiding Officers:**

Dave Bergner, Monte Vista Associates, LLC, presiding

**Sponsored By:**

Surface Transportation Weather (AH010)  
Winter Maintenance (AHD65)

**Event Description:**

The movement of goods and services is important all year round. These papers address ways of making sure that goods and services are not delayed on winter roads.

**Presentations:****Development of a Life-Cycle Model to Optimize RWIS Locations**

Lihui Zhao, New Jersey Institute of Technology

I-Jy Chien, New Jersey Institute of Technology

Jay N. Meegoda, New Jersey Institute of Technology

Zhengzhao Luo, City University of New York

## Session 352

**Event Title:**

Forecasting Performance to Loads and Environmental Factors for Bridge Management

**Event Date:**

Monday, January 12, 2015  
1:30PM - 3:15PM

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**Presiding Officers:**

Basak Aldemir-Bektas, Iowa State University, presiding

**Sponsored By:**

Bridge Management (AHD35)

**Presentations:****Probabilistic Approach for Forecasting the Performance of Girder Bridges**

Dan Su, Rutgers University

Hani H. Nassif, Rutgers University

Eui-Seung Hwang, Kyung Hee University, South Korea

## Session 358

**Event Title:**

Emerging Research in Emergency Evacuation

**Event Date:**

Monday, January 12, 2015  
1:30PM - 3:15PM

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**Presiding Officers:**

Brian Wolshon, Louisiana State University, presiding

**Sponsored By:**

Emergency Evacuation (ANB80)

**Presentations:****Using Dynamic Flashing Yellow for Traffic Signal Control under Emergency Evacuation**

Charles Amoateng Asamoah, State University of New York - Buffalo

Qing He, State University of New York, Buffalo

## Session 370

**Event Title:**

Research in Transportation Economics

**Event Date:**

Monday, January 12, 2015  
2:00PM - 3:45PM

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**Presiding Officers:**

Mark W. Burris, Texas A&M University, presiding

**Sponsored By:**

Transportation Economics (ABE20)

**Event Description:**

This poster session includes research on many topics in transportation economics, including willingness to pay for advanced traveler information systems, benefit-cost analysis of autonomous vehicles, value-of-time calculations, public transit optimization, economic analysis of speed limit changes, and many more.

**Presentations:****Costs and Benefits of a Road Diet Conversion**

Robert B. Noland, Rutgers University  
Dong Gao, Rutgers University  
Eric J. Gonzales, University of Massachusetts, Amherst  
Charles Brown, Rutgers University

## Session 373

**Event Title:**

Tour de Data: Advances in Urban Data and Information Systems

**Event Date:**

Monday, January 12, 2015  
2:00PM - 3:45PM

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**Presiding Officers:**

Stacey Bricka, Texas A&M Transportation Institute, presiding

**Sponsored By:**

Urban Transportation Data and Information Systems (ABJ30)

**Presentations:****Graph-Based Approach to Measuring Efficiency of Urban Taxi Service System**

Xianyuan Zhan, Purdue University  
Xinwu Qian, Purdue University  
Satish V. Ukkusuri, Purdue University

## Session 375

**Event Title:**

Travel Time and Speed Data Applications, Methods, and Performance Measures

**Event Date:**

Monday, January 12, 2015  
2:00PM - 3:45PM

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**Presiding Officers:**

Karl Petty, Iteris, Inc., presiding

**Sponsored By:**

Urban Transportation Data and Information Systems (ABJ30)  
Highway Traffic Monitoring (ABJ35)  
Travel Time, Speed and Reliability (ABJ30(3))

**Event Description:**

Increasing availability and fidelity of travel time and speed data from point detectors and probe sources have enabled their use for a growing number of applications. This session covers a range of topics related to the application, analysis, and summarization of speed and travel time data. Specific topics include travel time and flow state prediction, outlier detection, performance measure development and presentation, vehicle trajectory estimation, and travel time reliability measurement.

**Presentations:****Probabilistic Urban Link Travel Time Estimation Model Using Large-Scale Taxi Trip Data**

Xianyuan Zhan, Purdue University  
Satish V. Ukkusuri, Purdue University

**Session 376**
**Event Title:**

Highway Traffic Monitoring  
Innovative and Advanced Methods  
and Technologies

**Event Date:**

Monday, January 12, 2015  
2:00PM - 3:45PM

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**Presiding Officers:**

Wiley Cunagin, Atkins, presiding

**Sponsored By:**

Highway Traffic Monitoring (ABJ35)  
Weigh-in-Motion (ABJ35(2))

**Event Description:**

Emerging highway traffic-monitoring technologies are highlighted during this poster session. The session highlights advancements in weigh-in-motion technology, network sensor location models and traffic flow estimation, detector performance, video-based detection, GPS-enabled smartphones capturing traffic data, inertial measurement units, small drones for traffic surveillance, and using stop bar detector information.

**Presentations:**
**Examining Applicability of Small Quadcopter Drone for Traffic Surveillance and Roadway Incident Monitoring**

Joyoung Lee, New Jersey Institute of Technology  
Zijia Zhong, New Jersey Institute of Technology  
Kitae Kim, New Jersey Institute of Technology  
Branislav Dimitrijevic, New Jersey Institute of Technology  
Bo Du, New Jersey Institute of Technology  
Slobodan Gueta, New Jersey Institute of Technology

**Multiclass Vehicle Classification Using GPS Data**

Zhanbo Sun, Western Michigan University  
Xuegang (Jeff) Ban, Rensselaer Polytechnic Institute

**Session 377**
**Event Title:**

Information Technology  
Applications in Transportation  
2015

**Event Date:**

Monday, January 12, 2015  
2:00PM - 3:45PM

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**Presiding Officers:**

Guohui Zhang, University of New Mexico, presiding

**Sponsored By:**

Information Systems and Technology (ABJ50)  
Geographic Information Science and Applications (ABJ60)

**Presentations:**
**WIMAP: Work Zone Interactive Monitoring Application**

Joyoung Lee, New Jersey Institute of Technology  
Zijia Zhong, New Jersey Institute of Technology  
Brijesh Singh, New Jersey Institute of Technology  
Jeevanjot Singh, New Jersey Department of Transportation  
Branislav Dimitrijevic, New Jersey Institute of Technology  
Kitae Kim, New Jersey Institute of Technology  
Bo Du, New Jersey Institute of Technology  
I-Jy Chien, New Jersey Institute of Technology  
Lazar N. Spasovic, New Jersey Institute of Technology

**Extended Implementation Methodology for Virtual Sensors: Web-Based Real-Time**

Transportation Data Collection and Analysis for Incident Management  
Abdullah Kurkcu, New York University  
Ender Faruk Morgul, New York University  
Kaan Ozbay, New York University

## Session 382

**Event Title:**

Congestion Pricing  
and Managed-Lane Showcase

**Event Date:**

Monday, January 12, 2015  
2:00PM - 3:45PM

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**Presiding Officers:**

Donald R. Samdahl, Fehr & Peers, presiding

**Sponsored By:**

Managed Lanes (AHB35)  
Congestion Pricing (ABE25)

**Presentations:****A Novel Peer-to-Peer Congestion Pricing Marketplace Enabled  
by Vehicle Automation**

Scott Le Vine, SUNY New Paltz and Imperial College London, United Kingdom  
John W. Polak, Imperial College London, United Kingdom

**Traffic Impacts of an Electronic Payment Biased Toll Pricing Initiative  
on Toll Bridges and Tunnels in New York City**

Agyenim Oti, City College of New York  
Camille Kamga, City College of New York

**Road Supply in Central London: Addition of an Ignored Social Cost**

Omid M. Rouhani, Cornell University  
Christopher R. Knittel, University of California, Davis  
Deborah Niemeier, University of California, Davis  
H. Oliver Gao, Cornell University  
Raymond Richard Geddes, Cornell University

## Session 386

**Event Title:**

Data-Driven Safety Management:  
Multidisciplinary Approach

**Event Date:**

Monday, January 12, 2015  
2:00PM - 3:45PM

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**Presiding Officers:**

Jake Kononov, DiExSys LLC, presiding

**Sponsored By:**

Transportation Safety Management (ANB10)

**Event Description:**

This session focuses on the infrastructure and behavioral issues in safety management with state-of-the-art data analysis methods.

**Presentations:****Review of Swedish Road Safety Policy in United States  
and Its Application in New York City Vision Zero Action Plan**

Scott Johnson, City College of New York  
Camille Kamga, City College of New York

**Effects of Private Road Management on Traffic Safety: Evidence from Mexico  
Raymond Richard Geddes, Cornell University**

Xiaodi Li, Cornell University  
Omid M. Rouhani, Cornell University



## Session 393

**Event Title:**

Economic Analysis  
of Environmental Impacts  
in Transportation

**Event Date:**

Monday, January 12, 2015  
3:45PM - 5:30PM

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**Presiding Officers:**

Nancy Bergeron, Transport Canada, presiding

**Sponsored By:**

Transportation Economics (ABE20)

**Presentations:**

**Environmental and Economic Impacts of Regionalizing Food Systems:  
The Case of Fluid Milk Supply Chains in the Northeastern U.S.**

XI HE, Cornell University  
H. Oliver Gao, Cornell University

**Event Title:**

Tort Liability and Risk Management  
Committee

**Event Date:**

Monday, January 12, 2015  
3:45PM - 5:30PM

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**Presiding Officers:**

Pamela S. Leslie, Miami-Dade Expressway Authority, presiding

**Sponsored By:**

Tort Liability and Risk Management (AL070)

**Presentations:**

**The Effects of New York's Scaffold Law on Worker Safety**

Jacob E. Arluck, Cornell University  
Raymond Richard Geddes, Cornell University  
Xiaodi Li, Cornell University  
Omid M. Rouhani, Cornell University

## Session 398

**Event Title:**

Activity Scheduling

**Event Date:**

Monday, January 12, 2015  
3:45PM - 5:30PM

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**Presiding Officers:**

Khandker M. Nurul Habib, University of Toronto, Canada, presiding

**Lectern Session**

Data and Information Technology, Planning and Forecasting

**Sponsored By:**

Traveler Behavior and Values (ADB10)

**Presentations:**

**A Queueing Framework and Analysis of Observed One-Day Travel and Activity Pat-  
terns**

Roger B. Chen, Rochester Institute of Technology  
Hani S. Mahmassani, Northwestern University

## Session 399

**Event Title:**

Dynamic Network Modeling

**Event Date:**

Monday, January 12, 2015  
3:45PM - 5:30PM

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**Presiding Officers:**

Henry X. Liu, University of Michigan, presiding

**Sponsored By:**

Transportation Network Modeling (ADB30)

**Presentations:**

**Continuous-time Instantaneous Dynamic User Equilibria  
on A Real World Traffic Network**

Rui Ma, University of California, Davis  
Xuegang (Jeff) Ban, Rensselaer Polytechnic Institute

## Session 407

**Event Title:**

Culvert Field Installation  
Case Studies

**Event Date:**

Monday, January 12, 2015  
3:45PM - 5:30PM

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**Presiding Officers:**

Brian Chestnut, Lane Enterprises Inc., presiding

**Sponsored By:**

Culverts and Hydraulic Structures (AFF70)  
Subsurface Soil-Structure Interaction (AFS40)

**Presentations:****Investigation of a Large Culvert Reconstruction Failure**

Dawit Negusse, Syracuse University  
Stephen Singh, Syracuse University  
Chen Liu, Syracuse University  
Luke Andrews, Syracuse University

## Session 413

**Event Title:**

Highway Capacity Level of Service:  
Love It or Leave It?

**Event Date:**

Monday, January 12, 2015  
3:45PM - 5:30PM

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**Presiding Officers:**

Christopher S. Kinzel, HDR Engineering, Inc., presiding

**Sponsored By:**

Highway Capacity and Quality of Service (AHB40)

**Presentations:****History of the Debate**

Roger P. Roess, Polytechnic Institute of New York University

## Session 416

**Event Title:**

Fleet Management: Safety,  
Prioritizing, and Planning

**Event Date:**

Monday, January 12, 2015  
3:45PM - 5:30PM

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**Presiding Officers:**

Scott Capps, North Carolina Department of Transportation, presiding  
Henry Canipe, AgileAssets, Inc., presiding

**Sponsored By:**

Maintenance Equipment (AHD60)  
Winter Maintenance (AHD65)

**Event Description:**

This is a diverse session in which papers and presentations address relevant issues pertaining to fleet management practice. The session includes equipment safety and visibility through a paper presentation related to luminosity for equipment service vehicles. A case study conducted in South Korea analyzing the aspects of fleet management needs for road maintenance projects will be explored. A third paper presents a stochastic dynamic fleet management model.

**Presentations:****Luminous Intensity Requirements for Service Vehicle Warning Beacons**

John D. Bullough, Rensselaer Polytechnic Institute  
Mark S. Rea, Rensselaer Polytechnic Institute

## Session 421

**Event Title:**

Tell Me About It! Real-time Customer Feedback to Improve Transit System Performance

**Event Date:**

Monday, January 12, 2015  
3:45PM - 5:30PM

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**Presiding Officers:**

Amy L. Van Doren, Marin County Transit District, presiding

**Sponsored By:**

Transit Management and Performance (AP010)

**Event Description:**

How can transit agencies integrate timely customer input to improve service? Well-designed customer feedback tools can lead to more responsive planning and system management decisions. This session will explore the role of social media, open data, and stated & revealed preference surveys.

**Presentations:****Co-Monitoring for Transit Management**

Sarah Kaufman, New York University

## Session 444

**Event Title:**

Incident Management

**Event Date:**

Monday, January 12, 2015  
4:15PM - 6:00PM

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**Presiding Officers:**

Mecit Cetin, Old Dominion University, Norfolk, presiding

**Sponsored By:**

Freeway Operations (AHB20)

**Event Description:**

This session includes papers that deal with the general topic of incident management.

**Presentations:****Spatial Analysis of Highway Incident Durations in the Context of Hurricane Sandy**

Kun Xie, New York University

Kaan Ozbay, New York University

Hong Yang, New York University

## Session 449

**Event Title:**

Contemporary Theories and Practices in Freight Planning and Logistics

**Event Date:**

Monday, January 12, 2015  
4:15PM - 6:00PM

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**Presiding Officers:**

Xiubin Bruce Wang, Texas A&M University, presiding

**Sponsored By:**

Freight Transportation Planning and Logistics (AT015)

**Presentations:****Landscape of Motor Freight Transportation and Warehousing:****Analysis and Findings from Six Large Metropolitan Areas in the U.S.**

Qian Wang, State University of New York, Buffalo

Tao Zhou, State University of New York, Buffalo

Shuai Tang, State University of New York, Buffalo

Li Yin, State University of New York, Buffalo

**Freight Deliveries Directly Generated by Residential Units:****An Analysis with the 2009 NHTS Data**

Yiwei Zhou, Rensselaer Polytechnic Institute

Xiaokun (Cara) Wang, Rensselaer Polytechnic Institute

**The Role Of Classification Systems In Freight Trip Attraction Modeling**

Ivan Sanchez-Diaz, Chalmers University of Technology, Sweden

Shama Campbell, Rensselaer Polytechnic Institute

Miguel Jaller, University of California, Davis

Jose Holguin-Veras, Rensselaer Polytechnic Institute

Catherine Theresa Lawson, State University of New York, Albany

**Event Title:**

Visibility Committee

**Presiding Officers:**

John D. Bullough, Rensselaer Polytechnic Institute, presiding

**Event Date:**

Monday, January 12, 2015  
7:30PM - 9:30PM

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**Sponsored By:**

Visibility (AND40)

## Session 464

**Event Title:**

Connected Vehicles

**Presiding Officers:**

Jane E. Lappin, Volpe National Transportation Systems Center, presiding

**Event Date:**

Monday, January 12, 2015  
7:30PM - 9:30PM

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**Sponsored By:**

Intelligent Transportation Systems (AHB15)

**Presentations:****On Dynamic Information Propagation through Inter-Vehicle Communications**

Feng Zhu, Purdue University

Satish V. Ukkusuri, Purdue University

## Session 465

**Event Title:**

Safety of Intelligent Transportation Systems

**Presiding Officers:**

Jane E. Lappin, Volpe National Transportation Systems Center, presiding

**Sponsored By:**

Intelligent Transportation Systems (AHB15)

**Event Date:**

Monday, January 12, 2015  
7:30PM - 9:30PM

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**Presentations:****A Framework for the Deployment of Intelligent Transportation Systems in a Multi-Agency Urban Environment**

Arthur Thomas O'Connor, U.S. Department of Transportation

John C. Falcochio, New York University

## Session 469

**Event Title:**

Recent Progress in Vehicle-Highway Automation

**Presiding Officers:**

James Anderson, RAND Corporation, presiding

**Sponsored By:**

Vehicle-Highway Automation (AHB30)  
Emerging Technology Law (AL040)

**Event Date:**

Monday, January 12, 2015  
7:30PM - 9:30PM

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**Presentations:****The Tension Between Autonomous Cars' Impacts on Intersection Level of Service and Their Occupants' Use of Travel Time for Leisure or Economically Productive Activities**

Scott Le Vine, SUNY New Paltz and Imperial College London, United Kingdom

Alireza Zolfaghari, Imperial College London, United Kingdom

John W. Polak, Imperial College London, United Kingdom

**Linear Programming Formulation for Autonomous Intersection Control and Dynamic Traffic Assignment Under Connected Vehicle Environment**

Feng Zhu, Purdue University

Satish V. Ukkusuri, Purdue University

## Session 470

**Event Title:**

Current Projects and New Developments in Vehicle-Highway Automation Showcase

**Event Date:**

Monday, January 12, 2015  
7:30PM - 9:30PM

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**Poster Session | Spotlight Session**

Hot Topic: Connected-Automated Vehicles, Operations and Traffic Management, Safety and Human Factors, Vehicles and Equipment

**Sponsored By:**

Vehicle-Highway Automation (AHB30)

**Presentations:****Vehicle Automation and Road Vehicle Speed Governance**

Scott Le Vine, SUNY New Paltz and Imperial College London, United Kingdom  
Alireza Zolfaghari, Imperial College London, United Kingdom  
John W. Polak, Imperial College London, United Kingdom

## Session 471

**Event Title:**

Impacts of Traffic Control Devices on Speed and Road User Behavior

**Event Date:**

Monday, January 12, 2015  
7:30PM - 9:30PM

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**Presiding Officers:**

David A. Noyce, University of Wisconsin, Madison, presiding  
Paul J. Carlson, Texas A&M Transportation Institute, presiding

**Sponsored By:**

Traffic Control Devices (AHB50)

**Presentations:****A Ponzo Scheme for Roadway Safety: Modifying Chevron Size and Position to Reduce Driver Speeds on Curves**

John D. Bullough, Rensselaer Polytechnic Institute  
Mark S. Rea, Rensselaer Polytechnic Institute  
Nicholas P. Skinner, Rensselaer Polytechnic Institute

## Session 477

**Event Title:**

Bicycle Transportation, Part 1: Behavior and Policy (Part 2, Session 849)

**Event Date:**

Monday, January 12, 2015  
7:30PM - 9:30PM

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**Presiding Officers:**

Christopher R. Cherry, University of Tennessee, Knoxville, presiding  
Gabe Rousseau, Federal Highway Administration, presiding  
Jeffrey J. LaMondia, Auburn University, presiding

**Sponsored By:**

Bicycle Transportation (ANF20)

**Presentations:****Estimation of Optimal Inventory Levels at Stations of Bicycle-Sharing System**

Pulkit Parikh, Purdue University  
Satish V. Ukkusuri, Purdue University

**Biking for Goods Is Good: Assessment of CO2 Savings in Paris**

Martin Koning, French Institute of Science and Technology for Transport, Development and Networks  
Alison J. Conway, City College of New York

Tuesday

# 01/13/15

## Session 484

**Event Title:**

Climate Change and Transportation:  
Best Papers of 2015

**Event Date:**

Tuesday, January 13, 2015  
8:00AM - 9:45AM

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**Presiding Officers:**

Robert B. Noland, Rutgers University, presiding

**Sponsored By:**

Strategic Management (ABC10)  
Transportation and Air Quality (ADC20)  
Climate Change (ADC70(2))  
Special Task Force on Climate Change and Energy (A0020T)  
Transportation Energy (ADC70)

**Event Description:**

This session is a special award program recognizing excellence in papers on climate change adaptation and mitigation in transportation. Peer reviewed with the assistance of multiple TRB committees, these four papers were selected among dozens of eligible papers for their innovation and content related to this very important topic.

## Session 490

**Event Title:**

New Applications of Travel Time  
Data from Probes

**Event Date:**

Tuesday, January 13, 2015  
8:00AM - 9:45AM

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**Presiding Officers:**

Michael Daniel Fontaine,  
Virginia Center for Transportation Innovation and Research, presiding

**Sponsored By:**

Urban Transportation Data and Information Systems (ABJ30)  
Highway Traffic Monitoring (ABJ35)  
Travel Time, Speed and Reliability (ABJ30(3))

**Event Description:**

Probe data derived from private sector sources or electronic toll collection systems are an increasingly important data source for transportation agencies. This session discusses a number of new applications of this data. Topics covered include applications to performance measurement, methods to identify shockwave boundaries, and methods to validate arterial travel time data generated by a private sector source.

**Presentations:**

**Improved Travel Time Estimation for Reliable Performance**

**Measure Development for Closed Highways**

Hong Yang, New York University  
Kaan Ozbay, New York University  
Kun Xie, New York University

**Performance Measures To Characterize Corridor Travel Time Delay  
Based On Probe Vehicle Data**

Thomas M. Brennan, College of New Jersey  
Stephen Matthew Remias, Purdue University  
Lucas Manili, The College of New Jersey

## Session 492

**Event Title:**

Optimization and Network Design

**Event Date:**

Tuesday, January 13, 2015  
8:00AM - 9:45AM

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**Presiding Officers:**

Miguel Figliozzi, Portland State University, presiding

**Sponsored By:**

Transportation Network Modeling (ADB30)

**Presentations:****Surrogate Optimization Techniques for Solving Discrete Transportation Network Design Problems**

Omid M. Rouhani, Cornell University

Juliane Müller, Cornell University

H. Oliver Gao, Cornell University

Christine Shoemaker, Cornell University

Eric Jun Wang, Cornell University

## Session 493

**Event Title:**

Accessibility, Commuting,  
and Income Dynamics

**Event Date:**

Tuesday, January 13, 2015  
8:00AM - 9:45AM

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**Presiding Officers:**

Ann M. Hartell, Vienna University of Economics and Business, Austria, presiding

**Sponsored By:**

Social and Economic Factors of Transportation (ADD20)

**Event Description:**

This session includes papers that deal with the general topic of incident management.

**Presentations:****A Look at Relationship Between Households' Housing and Transportation Expenditures from a Lifestyle Perspective**

Devajyoti Deka, Rutgers University

## Session 499

**Event Title:**

Special Topics in Steel Bridges

**Event Date:**

Tuesday, January 13, 2015  
8:00AM - 9:45AM

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**Presiding Officers:**

Dennis R. Mertz, University of Delaware, presiding

**Sponsored By:**

Steel Bridges (AFF20)

**Event Description:**

This session covers four topics related to steel bridges. The topics address issues related to a variety of steel bridge types including both relatively routine, short- and moderate-span bridges and also specialty and long-span bridges.

**Presentations:****Simple Approach to Calculate Displacements and Rotations in Integral Abutment Bridges**

Suhail Albhaisi, Jacobs Engineering Group Inc.

Hani H. Nassif, Rutgers University

**Event Title:**

Intercity Passenger  
Rail Committee

**Event Date:**

Tuesday, January 13, 2015  
8:00AM - 12:00PM

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**Presiding Officers:**

David P. Simpson, David P. Simpson Consultants, LLC, presiding

**Sponsored By:**

Intercity Passenger Rail (AR010)

**Presentations:**

**New website launch and demo Maite Pena Alvarez**  
**Newsletter Update Penny Eickemeyer**

## Session 505

**Event Title:**

Innovative Teaching of Highway  
Capacity Manual Procedures

**Event Date:**

Tuesday, January 13, 2015  
8:00AM - 9:45AM

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**Presiding Officers:**

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

**Sponsored By:**

Highway Capacity and Quality of Service (AHB40)

**Event Description:**

The Highway Capacity Manual 2010 (HCM) is utilized by a broad range of professionals. As part of the effort to promote effective teaching and training of highway capacity concepts, the Highway Capacity and Quality of Service (HCQS) Committee issued a call for papers to university faculty and lecturers requesting innovative approaches in teaching highway capacity concepts to university students and practicing engineers and planners.

## Session 515

**Event Title:**

Public Transportation Marketing:  
User Perception, Satisfaction and  
Segmentation

**Event Date:**

Tuesday, January 13, 2015  
8:00AM - 9:45AM

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**Presiding Officers:**

Candace Brakewood, City College of New York, presiding

**Sponsored By:**

Public Transportation Marketing and Fare Policy (AP030)

## Session 522

**Event Title:**

Adoption of Light-Emitting Diode  
Lighting by Airports: Planning  
and Design Issues

**Event Date:**

Tuesday, January 13, 2015  
8:00AM - 9:45AM

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**Presiding Officers:**

Isaac Richmond Nettey, Kent State University, presiding

**Sponsored By:**

Environmental Impacts of Aviation (AV030)  
Aircraft/Airport Compatibility (AV070)

**Event Description:**

The advent of "Going Green at Airports" has ushered in the broad adoption of light emitting diodes (LEDs) to replace incandescent lighting as a critical means of reducing energy consumption and realizing ancillary benefits associated with the longer average life expectancy of LEDs over incandescent lighting at airports. This panel session will address planning and design issues arising from the adoption of LED lighting by airports.

**Presentations:**

**Research Findings on Economic and Life-Cycle Impacts  
of Adoption of LED Lighting at Airports**  
John D. Bullough, Rensselaer Polytechnic Institute



## Session 528

**Event Title:**

Transportation Issues  
and Solutions in Major Cities

**Event Date:**

Tuesday, January 13, 2015  
8:30AM - 10:15AM

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**Presiding Officers:**

Aimee Jefferson, Center for Advanced Infrastructure and Transportation, presiding

**Sponsored By:**

Transportation Issues in Major U.S. Cities (ABE30)

**Event Description:**

Cities are where diverse populations, businesses, and health and academic institutions and agencies converge, creating a situation in which transportation modes and interests must operate within a confined spatial location. As such, transportation issues unique to urban environments arise that require major cities to be on the forefront of managing change and providing leadership. Please join us as we feature research that explores transportation issues and solutions in major cities.

**Presentations:****Exploring Spatial Variation of Urban Taxi Ridership  
Using Geographically Weighted Regression**

Xinwu Qian, Purdue University

Satish V. Ukkusuri, Purdue University

**Using Big Data of Automated Fare Collection System for Analysis and Improvement  
of Bus Rapid Transit Line in Istanbul, Turkey**

Kevser Simsek, Istanbul Metropolitan Municipality, Turkey

Ilgın Gokasar, Bogazici University, Turkey

Kaan Ozbay, New York University

## Session 531

**Event Title:**

Current Issues in Transportation  
and Air Quality

**Event Date:**

Tuesday, January 13, 2015  
8:30AM - 10:15AM

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**Presiding Officers:**

Britt A. Holmen, University of Vermont, presiding

**Sponsored By:**

Transportation and Air Quality (ADC20)

**Presentations:****Finding Link Driving Schedules for Integrated Traffic Emission Simulator  
by Clustering with Dynamic Time-Warping Measures**

H. M. Abdul Aziz, Purdue University

Satish V. Ukkusuri, Purdue University

## Session 533

**Event Title:**

Current Issues in Transportation-  
Related Noise and Vibration

**Event Date:**

Tuesday, January 13, 2015  
8:30AM - 10:15AM

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**Presiding Officers:**

Hugh Saurenman, ATS Consulting, presiding

**Sponsored By:**

Transportation-Related Noise and Vibration (ADC40)

**Presentations:****Modeling Pavement Noise with Different Tire Configurations  
Using Coupled FEM-BEM Analysis**

Hao Wang, Rutgers University

Yangmin Ding, Rutgers University

## Session 535

**Event Title:**

Current Issues in Waste Management and Resource Efficiency in Transportation

**Event Date:**

Tuesday, January 13, 2015  
8:30AM - 10:15AM

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**Presiding Officers:**

Edward D. Wallingford, Virginia Department of Transportation, presiding

**Sponsored By:**

Waste Management and Resource Efficiency in Transportation (ADC60)  
Transportation Infrastructure, Facilities, and Right-of-Ways as Sustainable Resources (ADC60(2))

**Presentations:**

**Environmental Life-Cycle Assessment of Pavement Maintenance, Repair, and Rehabilitation Activities**  
Ossama Salem, Syracuse University  
Sudipta Ghorai, Syracuse University

## Session 537

**Event Title:**

Multimodal Traffic Control

**Event Date:**

Tuesday, January 13, 2015  
8:30AM - 10:15AM

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**Presiding Officers:**

Eleni Christofa, University of Massachusetts, Amherst, presiding

**Sponsored By:**

Traffic Signal Systems (AHB25)

**Presentations:**

**Modeling Multi-modal Manual Signal Control under Event Occurrences**  
Nan Ding, State University of New York, Buffalo  
Qing He, State University of New York, Buffalo  
Changxu Wu, State University of New York, Buffalo  
Julie Fetzer, State University of New York, Buffalo

## Session 538

**Event Title:**

Signal Control at Alternative Intersection Designs

**Event Date:**

Tuesday, January 13, 2015  
8:30AM - 10:15AM

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**Presiding Officers:**

Qing He, State University of New York, Buffalo, presiding

**Sponsored By:**

Traffic Signal Systems (AHB25)

## Session 539

**Event Title:**

Traffic Flow Theory: Part 2  
(Part 1, Session 445)

**Event Date:**

Tuesday, January 13, 2015  
8:30AM - 10:15AM

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**Presiding Officers:**

Vikash V. Gayah, Pennsylvania State University, presiding

**Poster Session**

Operations and Traffic Management

**Sponsored By:**

Traffic Flow Theory and Characteristics (AHB45)

**Presentations:**

**Accounting for Traffic Oscillation under the Mixed Connected Vehicle Environment in Microscopic Traffic Simulation**  
Feng Zhu, Purdue University  
Satish V. Ukkusuri, Purdue University

**Fine-Grained Modeling of Arterial Traffic: A Data Fusion and Information Integration Approach**

Zhanbo Sun, Western Michigan University  
Peng Hao, University of California, Riverside  
Xuegang (Jeff) Ban, Rensselaer Polytechnic Institute

## Session 540

**Event Title:**

Crash-Based Safety Analysis and Modeling

**Event Date:**

Tuesday, January 13, 2015  
8:30AM - 10:15AM

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**Presiding Officers:**

Alfonso Montella, University of Naples Federico II, Italy, presiding

**Sponsored By:**

Safety Data, Analysis and Evaluation (ANB20)

**Presentations:****Investigating the Impact of Work Zones on Crash Severity by Comparative Analysis**

Ozgun Ozturk, Izmir Institute of Technology

Kaan Ozbay, New York University

Hong Yang, New York University

## Session 541

**Event Title:**

Distracted Driving: Methods, Patterns, and Impact

**Event Date:**

Tuesday, January 13, 2015  
8:30AM - 10:15AM

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**Presiding Officers:**

William J. Horrey, Liberty Mutual Research Institute for Safety, presiding

**Sponsored By:**

Vehicle User Characteristics (AND10)

**Presentations:****Characterizing Driver Cell Phone Use at Signalized Intersections Using Software-Defined Radio**

Thomas M. Brennan, College of New Jersey

Joseph Jesson, College of New Jersey

## Session 543

**Event Title:**

Various Aspects of User Information Research

**Event Date:**

Tuesday, January 13, 2015  
8:30AM - 10:15AM

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**Presiding Officers:**

C. Y. David Yang, Federal Highway Administration, presiding

**Sponsored By:**

User Information Systems (AND20)

**Presentations:****Android Smartphone Application for Collecting, Sharing, and Predicting Border Crossing Wait Time**

Lei Lin, State University of New York, Buffalo

Qian Wang, State University of New York, Buffalo

Adel W. Sadek, State University of New York, Buffalo

Gregory Kott, Xerox Corporation

**Event Title:**

Young Members Council (YMC) Task Force

**Event Date:**

Tuesday, January 13, 2015  
10:15AM - 12:00PM

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**Presiding Officers:**

Alison J. Conway, City College of New York, presiding

**Sponsored By:**

Young Members Council (YMC) (A0040T)

**Event Title:**

Mechanistic Characterization of Pavement Layers Subcommittee, AFD80(1)

**Event Date:**

Tuesday, January 13, 2015  
10:15AM - 12:00PM

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**Presiding Officers:**

Lynne H. Irwin, Cornell University, presiding

**Sponsored By:**

Strength and Deformation Characteristics of Pavement Sections (AFD80)  
Mechanistic Characterization of Pavement Layers (AFD80(1))

## Session 553

**Event Title:**

Information and Communication Technologies and Travel: An International Scan

**Event Date:**

Tuesday, January 13, 2015  
10:15AM - 12:00PM

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**Presiding Officers:**

Xia Jin, Florida International University, presiding

**Lectern Session | Spotlight Session |****AICP Certification Maintenance Session**

Data and Information Technology, Planning and Forecasting

**Sponsored By:**

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

**Presentations:****Analysis of the Relationship between Internet Usage and Allocation of Time for Personal Travel and out of Home activities: Case study of Scotland**

Scott Le Vine, SUNY New Paltz and Imperial College London, United Kingdom

Charilaos Latinopoulos, Imperial College London, United Kingdom

John W. Polak, Imperial College London, United Kingdom

## Session 554

**Event Title:**

Role of Transit Investments in Promoting Development and Resilience

**Event Date:**

Tuesday, January 13, 2015  
10:15AM - 12:00PM

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**Presiding Officers:**

Gregory Bischak, U.S. Department of the Treasury, presiding

**Sponsored By:**

Transportation and Economic Development (ADD10)

**Event Description:**

This session presents several papers that investigate new dimensions in analyzing economic impacts of transit investments as well as the role of transit in promoting access and building resilience.

**Presentations:****Economic Impacts of Rail Transit on Recreational Shore Communities:****Case of North Jersey Coast Line**

Devajyoti Deka, Rutgers University

Michael L. Lahr, Rutgers University

Thomas W. Marchwinski, New Jersey Transit

Maia de la Calle, Rutgers University

## Session 558

**Event Title:**

Significant Advancements of the Understanding of Asphalt Pavements through Full Scale Accelerated Pavement Testing

**Event Date:**

Tuesday, January 13, 2015  
10:15AM - 12:00PM

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**Presiding Officers:**

Michael I. Hammons, U.S. Air Force Research Laboratory, presiding

**Sponsored By:**

Full-Scale Accelerated Pavement Testing (AFD40)

**Event Description:**

Significant advancements of the understanding of asphalt pavements (roadway and airfield) through full scale accelerated pavement testing. Session includes case studies, implementation practices, and analysis of both asphalt binders and mix properties.

**Presentations:****An Approach to Estimate Fatigue Endurance Limits of Flexible Airfield Pavements Using National Airport Pavement Test Facility Testing Results**

Thomas Redles, Rowan University

Ayman Ali, Rowan University

Yusuf A. Mehta, Rowan University

Douglas Cleary, Rowan University

## Session 559

**Event Title:**

Steel Bridge Fatigue and Fracture

**Event Date:**

Tuesday, January 13, 2015  
10:15AM - 12:00PM

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**Presiding Officers:**

Barton J. Newton, Parsons Brinckerhoff, presiding

**Sponsored By:**

Steel Bridges (AFF20)

Construction of Bridges and Structures (AFH40)

Fabrication and Inspection of Metal Structures (AFH70)

**Event Description:**

This session features four presentations on topics related to fatigue and fracture of steel girders and hydrogen embrittlement of steel anchor bolts. The presentations encompass issues related to relatively routine, short- to moderate-span bridges as well as a major signature bridge.

**Presentations:****Direct Redundancy Evaluation of Bridges Designated as Fracture-Critical  
Graziano Fiorillo, City College of New York**

Feng Miao, HNTB Corporation

Michel Ghosn, City College of New York

## Session 560

**Event Title:**

Building It Right: Recent Developments in Construction Quality Assurance

**Event Date:**

Tuesday, January 13, 2015  
10:15AM - 12:00PM

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**Presiding Officers:**

Katherine Holtz, Texas Department of Transportation, presiding

**Sponsored By:**

Management of Quality Assurance (AFH20)

**Presentations:****Development of Performance-Related Pay Adjustment for In-Place Air Voids of Asphalt Pavements**

Hao Wang, Rutgers University

Zilong Wang, Rutgers University

Robert Blight, New Jersey Department of Transportation

Eileen C. Sheehy, New Jersey Department of Transportation

## Session 573

**Event Title:**

Perception of Roadway Signs, Signals and Delineation

**Event Date:**

Tuesday, January 13, 2015  
10:15AM - 12:00PM

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**Presiding Officers:**

John D. Bullough, Rensselaer Polytechnic Institute, presiding

**Lectern Session**

Operations and Traffic Management, Safety and Human Factors

**Sponsored By:**

Visibility (AND40)

## Session 574

**Event Title:**

New Research in Car and Bikesharing

**Event Date:**

Tuesday, January 13, 2015  
10:15AM - 12:00PM

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**Presiding Officers:**

Matthew Ridgway, Fehr & Peers, presiding

**Sponsored By:**

Bicycle Transportation (ANF20)  
Emerging and Innovative Public Transport and Technologies (AP020)

**Presentations:****Business and Bikeshare User Perceptions of the Economic Benefits of Capital Bikeshare**

Ralph Buehler, Virginia Polytechnic Institute and State University  
Andrea Hamre, Virginia Polytechnic Institute and State University

## Session 586

**Event Title:**

Current Issues in Transportation Energy

**Event Date:**

Tuesday, January 13, 2015  
10:45AM - 12:30PM

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**Presiding Officers:**

Paul N. Leiby, Oak Ridge National Laboratory, presiding

**Sponsored By:**

Transportation Energy (ADC70)

**Presentations:****Life-Cycle Greenhouse Gas Emissions Associated with Highway Reconstruction: New Jersey Case Study**

Christopher S. Hanson, Rutgers University  
Robert B. Noland, Rutgers University

## Session 587

**Event Title:**

Current Issues in Alternative Transportation Fuels and Technologies

**Event Date:**

Tuesday, January 13, 2015  
10:45AM - 12:30PM

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**Presiding Officers:**

Timothy Lipman, University of California, Berkeley, presiding

**Sponsored By:**

Alternative Transportation Fuels and Technologies (ADC80)

**Presentations:****Modeling Intrahousehold Interactions for Use of Battery Electric Vehicles**

Jee Eun Kang, State University of New York, Buffalo

## Session 588

**Event Title:**

Research on Social and Economic Factors of Transportation

**Event Date:**

Tuesday, January 13, 2015  
10:45AM - 12:30PM

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**Presiding Officers:**

Steven Farber, University of Toronto, Canada, presiding

**Sponsored By:**

Social and Economic Factors of Transportation (ADD20)

**Presentations:****Black Riders: Co-racial Comfort and Public Transportation**

Michael Smart, Rutgers University  
Chanel L. Donaldson, Rutgers University

## Session 589

**Event Title:**

Emerging Topics in Seismic Design and Performance of Bridges

**Event Date:**

Tuesday, January 13, 2015  
10:45AM - 12:30PM

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**Presiding Officers:**

Michael D. Keever, California Department of Transportation, presiding

**Sponsored By:**

Seismic Design and Performance of Bridges (AFF50)

**Presentations:****Real-Time Seismic Damage Assessment Method for Bridges****Using Nonlinear Regression: Exploratory Analysis**

Ioannis Anastasopoulos, Dundee University, United Kingdom  
Panagiotis Ch. Anastasopoulos, State University of New York, Buffalo  
Athanasios Agalianos, Dundee University, United Kingdom  
Lampros Sakellariadis, Dundee University, United Kingdom

## Session 592

**Event Title:**

Highway Capacity Analysis for Interrupted Facilities

**Event Date:**

Tuesday, January 13, 2015  
10:45AM - 12:30PM

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**Presiding Officers:****Sponsored By:**

Highway Capacity and Quality of Service (AHB40)

**Presentations:****Evaluating the HCM 2010 Platoon Dispersion Model for Friction and Non-Friction Mid-Block Activity**

Albert Forde, New Jersey Institute of Technology  
Janice R. Daniel, New Jersey Institute of Technology

**Short-term Freeway Work Zone Capacity Estimation Using Support Vector Machine Incorporated with Probe-vehicle Data**

Bo Du, New Jersey Institute of Technology  
Joyoung Lee, New Jersey Institute of Technology  
Steven I-Jy Chien, New Jersey Institute of Technology  
Branislav Dimitrijevic, New Jersey Institute of Technology  
Kitae Kim, New Jersey Institute of Technology

## Session 595

**Event Title:**

Research and Applications in Evacuation Planning

**Event Date:**

Tuesday, January 13, 2015  
10:45AM - 12:30PM

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**Presiding Officers:**

Brian Wolshon, Louisiana State University, presiding

**Sponsored By:**

Emergency Evacuation (ANB80)

**Presentations:**

**Hurricane Evacuation Routing Strategy from Miami Beach:**

**Choice of Major Bridges**

**Arif Mohaimin Sadri, Purdue University**

Satish V. Ukkusuri, Purdue University

Pamela Murray-Tuite, Virginia Polytechnic Institute and State University

Hugh Gladwin, Florida International University

## Session 596

**Event Title:**

Current Issues in Aviation

**Event Date:**

Tuesday, January 13, 2015  
10:45AM - 12:30PM

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**Presiding Officers:**

John Werner Fischer, Consultant, presiding

**Sponsored By:**

Aviation Group (AV000)

Aviation Economics and Forecasting (AV040)

Aircraft/Airport Compatibility (AV070)

Aviation Security and Emergency Management (AV090)

**Presentations:**

**Bayesian Estimation of Air Ticket Cancellation Behavior**

Esther Chiew, Cornell University

Ricardo A. Daziano, Cornell University

## Session 598

**Event Title:**

System Optimization and Externality Reduction Through Pricing Systems.

**Event Date:**

Tuesday, January 13, 2015  
1:30PM - 3:15PM

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**Presiding Officers:**

David H. Ungemah, Parsons Brinckerhoff, presiding

**Sponsored By:**

Congestion Pricing (ABE25)

**Event Description:**

Factors such as reliable trip times, departure time flexibility and a perception of added safety are important to drivers considerations. Trip purpose and ultimate travel destinations are likely to have some significance in the decision making process and the pricing calculation.

**Presentations:**

**Implications of Fuel and Emissions Externalities, Spillovers to the Outside, and Temporal Variations on Zonal Congestion Pricing Schemes**

Omid M. Rouhani, Cornell University

H. Oliver Gao, Cornell University

Hossain Zarei, AECOM

Arash Beheshtian, Cornell University

**Event Title:**

Bicycle Transportation Committee

**Event Date:**

Tuesday, January 13, 2015  
1:30PM - 5:30PM

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**Presiding Officers:**

Ralph Buehler, Virginia Polytechnic Institute and State University, presiding

**Sponsored By:**

Bicycle Transportation (ANF20)



## Session 630

### Event Title:

Incorporating Urban Freight Innovations: Selected Best Practices in the U.S. and Abroad

### Event Date:

Tuesday, January 13, 2015  
1:30PM - 3:15PM

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### Presiding Officers:

Kazuya Kawamura, University of Illinois, Chicago, presiding

### Sponsored By:

Urban Freight Transportation (AT025)

### Event Description:

While many cities across the world share similar challenges concerning urban freight – congestion, pollution, economic costs, etc. – 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.

### Presentations:

#### Modeling the Safety Impacts of Off-Hour Delivery Programs in Urban Areas

Kun Xie, New York University  
Kaan Ozbay, New York University  
Hong Yang, New York University  
Jose Holguin-Veras, Rensselaer Polytechnic Institute  
Ender Faruk Morgul, New York University

## Session 635

### Event Title:

Environmental Implications of Marine-Based Energy Production

### Event Date:

Tuesday, January 13, 2015  
1:30PM - 3:15PM

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### Presiding Officers:

Ben Chicoski, Na Ali'i, LLC, presiding

### Sponsored By:

Marine Environment (AW030)

### Event Description:

The session illuminates impacts and varying degrees of risk to the environment at production sites and along the supply chains resulting from hydrocarbon exploration and production, offshore wind, marine and hydrokinetic technology, and other river- and estuary-based energy production. Both the positives and the negatives of offshore energy production will be explored and an attempt to address externalities will be made.

### Presentations:

#### Emissions Life Cycle of Liquid Natural Gas

James J. Corbett, University of Delaware  
James J. Winebrake, Rochester Institute of Technology

## Session 637

### Event Title:

Critical Transportation Infrastructure Protection

### Event Date:

Tuesday, January 13, 2015  
2:00PM - 3:45PM

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### Presiding Officers:

Yi Qi, Texas Southern University, presiding

### Sponsored By:

Critical Transportation Infrastructure Protection (ABE40)

### Presentations:

#### Multimodal Transit Connectivity for Flexibility in Extreme Events

Rae Zimmerman, New York University  
Carlos E. Restrepo, New York University  
Joshua Sellers, New York University  
Arundathi Amirapu, New York University  
T. R. Pearson, New York University

#### Bayesian Spatial Modeling and Risk Mapping of Downed Trees Along Roadways Using Data from Hurricanes Irene and Sandy

Sami Demiroglu, Rutgers University  
Kaan Ozbay, New York University

## Session 646

**Event Title:**

Sustainable Technologies  
in Asphalt Mixtures

**Event Date:**

Tuesday, January 13, 2015  
2:00PM - 3:45PM

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**Presiding Officers:**

Stacy Glidden, Mathy Technology & Engineering, presiding

**Sponsored By:**

Characteristics of Nonasphalt Components of Asphalt Paving Mixtures (AFK30)

**Presentations:****High-Temperature Characterization of Crumb-Rubber-Modified Asphalt Binders and Mixtures in New York State**

Thomas A. Bennert, Rutgers University  
Raj N. Dongre, Dongre Laboratory Services Inc.  
Christopher Ericson, Rutgers University  
Zoeb Zavery, New York State Department of Transportation

**Evaluating Laboratory-produced Asphalt Mixtures with RAP in Terms of Rutting, Fatigue, Predictive Capabilities, and High RAP Content Potential**

Mohammadreza Sabouri, North Carolina State University, Raleigh  
Thomas A. Bennert, Rutgers University  
Jo Sias Daniel, University of New Hampshire  
Y. Richard Kim, North Carolina State University, Raleigh

**Investigation of High-Modulus Asphalt Mixture with High Content of Reclaimed Asphalt Pavement**

Tao Ma, Southeast University, China  
Hao Wang, Rutgers University  
Yongli Zhao, Southeast University, China  
Liang He, Chongqing Jiaotong University, China

## Session 647

**Event Title:**

Design and Construction Issues for  
Asphalt Surface Mixtures

**Event Date:**

Tuesday, January 13, 2015  
2:00PM - 3:45PM

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**Presiding Officers:**

Danny Gierhart, Asphalt Institute, presiding

**Sponsored By:**

Characteristics of Asphalt-Aggregate Combinations to Meet Surface Requirements (AFK40)

**Presentations:****Investigation of High and Low Los Angeles Values and Alternate Gradations for Open-Graded Friction Course Mixtures**

David Herndon, Herndon Asphalt Engineering and Consulting  
Feipeng Xiao, Tongji University, China  
Serji Amirkhanian, University of Alabama  
Hao Wang, Rutgers University

## Session 651

**Event Title:**

Transformative Transit Data  
Research and Applications

**Event Date:**

Tuesday, January 13, 2015  
2:00PM - 3:45PM

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**Presiding Officers:**

Catherine Theresa Lawson, State University of New York, Albany, presiding

**Sponsored By:**

Public Transportation Group (AP000)

**Presentations:****Method for Linking Transit Smart Card Data and Survey Responses to Evaluate Travel Behavior and Its Application to Before-and-After Analysis of Real-Time Information**

Candace Brakewood, City College of New York  
Kari Edison Watkins, Georgia Institute of Technology

## Session 657

**Event Title:**

Automated Transit Systems

**Event Date:**

Tuesday, January 13, 2015  
2:00PM - 3:45PM

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**Presiding Officers:**

Matthew Lesh, Federal Transit Administration, presiding

**Sponsored By:**

Automated Transit Systems (AP040)

**Event Description:**

This session includes acceptable papers covering the topic of planning and operating automated transit systems. The areas covered include personal rapid transit, shared autonomous fleets, dynamic ridesharing, unattended train operations, transit vehicle-to-vehicle and vehicle-to-infrastructure applications, automated guideway transit, and urban design and parking related to autonomous vehicles.

**Presentations:****Proven Safety Advantages of Automated Guideway Transit Systems**

Rongfang Liu, New Jersey Institute of Technology

Nadereh Moini, University of Illinois, Chicago

## Session 658

**Event Title:**

Intermodal Passenger Facilities:  
Design and Modeling (8)

**Event Date:**

Tuesday, January 13, 2015  
2:00PM - 3:45PM

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**Presiding Officers:**

Richard F. Clarke, Denver Regional Transportation District, presiding

Deborah Matherly, Louis Berger Group, Inc., presiding

**Sponsored By:**

Intermodal Transfer Facilities (AP045)

**Event Description:**

Many factors influence the optimal access, design, and travel of intermodal passenger facilities. Models have been developed to optimize flows and transfers. Research has also been conducted related to access features, design considerations, and efficiency of these intermodal facilities as featured in this session.

**Presentations:****Optimizing Passenger Transfer Coordination in a Large-Scale Rapid Rail Network**

Xiaobo Liu, Southwest Jiaotong University, China

Hezhou Qu, Southwest Jiaotong University, China

Steven I-Jy Chien, New Jersey Institute of Technology

Lazar N. Spasovic, New Jersey Institute of Technology

Bin Ran, University of Wisconsin, Madison

Minghua Huang, Southwest Jiaotong University, China

## Session 659

**Event Title:**

Recent Developments in Paratransit

**Event Date:**

Tuesday, January 13, 2015  
2:00PM - 3:45PM

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**Presiding Officers:**

Jennifer Martinez Frost, Dallas Area Rapid Transit, presiding

**Sponsored By:**

Paratransit (AP060)

**Presentations:****Factors Associated with Travel Time Reliability of Disability Paratransit Trips**

Devajyoti Deka, Rutgers University

**Revisiting Labor Supply of New York City Taxi Drivers:****Empirical Evidence from Large-Scale Taxi Data**

Ender Faruk Morgul, New York University

Kaan Ozbay, New York University

## Session 663

### Event Title:

Logistics of Disaster Response and Business Continuity

### Event Date:

Tuesday, January 13, 2015  
2:00PM - 3:45PM

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### Presiding Officers:

Jon S. Meyer, Meyer Associates, presiding

### Sponsored By:

Logistics of Disaster Response and Business Continuity (AT065)

### Presentations:

#### Multimodal Logical Architecture for Emergency Transportation Toward Better Decision Making in Humanitarian Logistics

Eren Erman Ozguven, Florida State University

Kaan Ozbay, New York University

Shrisan Iyer, New York City Transit Authority

Ryan Whytlaw, Rutgers University

Jon Carnegie, Rutgers University

## Session 668

### Event Title:

Pricing in Transportation

### Event Date:

Tuesday, January 13, 2015  
3:45PM - 5:30PM

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### Presiding Officers:

Mark W. Burris, Texas A&M University, presiding

### Sponsored By:

Transportation Economics (ABE20)

### Event Description:

This session looks at several issues with respect to road pricing.

### Presentations:

#### Jonathan Richard Peters, City University of New York, Staten Island

David King, Columbia University

Cameron Elliott Gordon, University of Canberra, Australia

Nora Santiago, City University of New York, Staten Island

## Session 673

### Event Title:

Advanced Traveler Information and Behavioral Patterns

### Event Date:

Tuesday, January 13, 2015  
3:45PM - 5:30PM

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### Presiding Officers:

Roger B. Chen, Rochester Institute of Technology, presiding

### Sponsored By:

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

Advanced Traveler Information Systems (ATIS) (AND20(2))

## Session 675

### Event Title:

On-road and Not-on-Road Truck Activities and Emissions

### Event Date:

Tuesday, January 13, 2015  
3:45PM - 5:30PM

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### Presiding Officers:

John Koupal, Eastern Research Group, Inc., presiding

### Sponsored By:

Transportation and Air Quality (ADC20)

### Presentations:

#### Analysis of Environmental and Infrastructure Impacts of Transportation Activities Associated with High-Volume Hydraulic Fracturing Operations in Marcellus Shale Formation

Karl Korfmacher, Rochester Institute of Technology

Scott Hawker, Rochester Institute of Technology

James J. Winebrake, Rochester Institute of Technology

**Event Title:**

Aircraft/Airport  
Compatibility Committee

**Event Date:**

Tuesday, January 13, 2015  
3:45PM - 5:30PM

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**Presiding Officers:**

Geoffrey Scott Baskir, CSSI, Inc., presiding

**Sponsored By:**

Aircraft/Airport Compatibility (AV070)

**Presentations:****Evaluation Of Fatigue Cracking Performance Of Asphalt Mixtures Under Heavy Static And Dynamic Aircraft**

Maria Chiara Guercio, Villanova University  
Yusuf A. Mehta, Rowan University  
Leslie Myers McCarthy, Villanova University

**Event Title:**

Transformative Transit Data Joint  
Subcommittee of AP000, ABJ00

**Event Date:**

Tuesday, January 13, 2015  
3:45PM - 5:30PM

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**Presiding Officers:**

Catherine Theresa Lawson, State University of New York, Albany, presiding

**Sponsored By:**

Public Transportation Group (AP000)

**Event Description:**

The Joint Subcommittee on Transformative Trends in Transit Data (AP000/ABJ00) focuses on the generation, processing, and emerging opportunities for integrating existing and emerging transit data streams with other transit and transit-related datasets to strengthen the entire network of information.

**Session 677****Event Title:**

Sustainable Transportation  
Indicators and Measures - From  
Meta to Local Perspectives

**Event Date:**

Tuesday, January 13, 2015  
3:45PM - 5:30PM

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**Presiding Officers:**

Todd Alexander Litman, Victoria Transport Policy Institute, Canada, presiding

**Sponsored By:**

Transportation and Sustainability (ADD40)

**Event Description:**

Sustainable indicators and performance measures help conceptualize and operationalize sustainability objectives into various levels of transportation-related planning and decision-making. These presentations explore the concept of sustainable indicators and performance measures from a board meta-framework to local perspectives and tools that help integrate sustainability objectives into agency planning (using case study examples of Buffalo, NY and Santa Cruz, CA)..

**Presentations:****A GIS-Based Performance Measurement System for Assessing Transportation Sustainability and Community Livability**

Qian Wang, State University of New York, Buffalo  
Shuai Tang, State University of New York, Buffalo  
Jinge Hu, State University of New York, Buffalo  
Xiao Chen, State University of New York, Buffalo  
Le Wang, State University of New York, Buffalo

## Session 687

**Event Title:**

Advances in Work Zone Safety

**Event Date:**

Tuesday, January 13, 2015  
3:45PM - 5:30PM

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**Presiding Officers:**

Steven D. Schrock, University of Kansas, presiding

**Sponsored By:**

Work Zone Traffic Control (AHB55)

**Presentations:****Modeling Crash Risk of Highway Work Zones with Relatively Short Durations**

Hong Yang, New York University  
Kaan Ozbay, New York University  
Kun Xie, New York University  
Bekir Bartin, Istanbul Kemerburgaz University

## Session 689

**Event Title:**

Pavement Preservation Strategy  
Selection and Cost Impacts

**Event Date:**

Tuesday, January 13, 2015  
3:45PM - 5:30PM

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**Presiding Officers:**

Cindy K. Estakhri, Texas A&M Transportation Institute, presiding

**Sponsored By:**

Pavement Preservation (AHD18)

**Event Description:**

This session deals with selection of strategies for pavement preservation as well as the impact of pre-existing condition of strategy effectiveness.

**Presentations:****Developing Pavement Preservation Strategies Using Pavement Me Design For The State Of Rhode Island**

Sean Coffey, Rowan University  
Ayman Ali, Rowan University  
Yusuf A. Mehta, Rowan University  
Leslie Myers McCarthy, Villanova University

## Session 690

**Event Title:**

Risk Models and Deck Assessment  
for Bridge Management

**Event Date:**

Tuesday, January 13, 2015  
3:45PM - 5:30PM

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**Presiding Officers:**

Paul D. Thompson, Consultant, presiding

**Sponsored By:**

Bridge Management (AHD35)

**Presentations:****Multi-Modal Non-Destructive Testing Damage Quantification, Presentation, and Condition Rating of Bridge Decks**

Brian M. Pailes, Vector Corrosion Services  
Nenad Gucunski, Rutgers University

## Session 701

**Event Title:**

Managing Pavement Use Under  
Heavy Vehicle Loads

**Event Date:**

Tuesday, January 13, 2015  
3:45PM - 5:30PM

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**Presiding Officers:**

Alison J. Conway, City College of New York, presiding

**Event Description:**

This session deals with selection of strategies for pavement preservation as well as the impact of pre-existing condition of strategy effectiveness.

## Session 711

**Event Title:**

Environmental Justice  
in Transportation

**Event Date:**

Tuesday, January 13, 2015  
4:15PM - 6:00PM

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**Presiding Officers:**

P. S. Sriraj, University of Illinois, Chicago, presiding

**Sponsored By:**

Environmental Justice in Transportation (ADD50)

**Presentations:****Long Routes to School? School Travel and Activity Participation  
Among High School Students**

Carole Turley Voulgaris, University of California, Los Angeles  
Brian D. Taylor, University of California, Los Angeles  
Michael Smart, Rutgers University

## Session 716

**Event Title:**

Aging of Asphalt Binders

**Event Date:**

Tuesday, January 13, 2015  
4:15PM - 6:00PM

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**Presiding Officers:**

Sheng Zhao, University of Tennessee, Knoxville, presiding

**Sponsored By:**

Characteristics of Asphalt Materials (AFK20)  
Pavement Maintenance (AHD20)

**Event Description:**

Community impact assessment (CIA) is a process for evaluating the effects of transportation actions on communities and the quality of life of their residents. This poster session showcases projects that highlight innovative CIA practices, especially through the use of technology; support sustainable transportation planning efforts; and focus on local economic development and the financial health or viability of neighborhoods and communities.

**Presentations:****Investigation of Impact of Aging and Amount of Reclaimed Asphalt Pavement  
on Effectiveness of Rejuvenators**

Ayman Ali, Rowan University  
Yusuf A. Mehta, Rowan University  
Aaron Nolan, Rowan University  
Thomas A. Bennert, Rutgers University

## Session 720

**Event Title:**

Experimental and Numerical  
Modeling of Asphalt Mixtures  
and Pavements

**Event Date:**

Tuesday, January 13, 2015  
4:15PM - 6:00PM

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**Presiding Officers:**

Roberto Soares, PSI Technologies, Inc., Canada, presiding  
Shadi Saadeh, California State University, Long Beach, presiding

**Sponsored By:**

Characteristics of Asphalt Paving Mixtures to Meet Structural Requirements (AFK50)

**Presentations:****Numerical Analysis of Semicircular Bending Test for Asphalt Concrete  
with Heterogeneous Microstructure**

Jian Wang, Rutgers University  
Hao Wang, Rutgers University  
Jiaqi Chen, Central South University, China



## Session 729

### Event Title:

Advanced Research and Practices in Urban Freight Transportation

### Event Date:

Tuesday, January 13, 2015  
4:15PM - 6:00PM

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### Presiding Officers:

Qian Wang, State University of New York, Buffalo, presiding

### Sponsored By:

Transportation Issues in Major U.S. Cities (ABE30)  
Urban Freight Transportation (AT025)

### 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 poster session showcases innovation, best practices, and the latest research in urban and regional freight transportation.

### Presentations:

#### OFF-HOUR DELIVERIES: LESSONS LEARNED FROM THE OUTREACH IN NEW YORK CITY

Jeffrey Wojtowicz, Rensselaer Polytechnic Institute  
Stacey Darville Hodge, New York City Department of Transportation  
Shama Campbell, Rensselaer Polytechnic Institute  
Jose Holguin-Veras, Rensselaer Polytechnic Institute  
Xiaokun (Cara) Wang, Rensselaer Polytechnic Institute

#### Geography of Warehousing in Urban Areas: Spatial Analysis and Findings of Transportation Warehouses and Distribution Centers in New York Metropolitan Region

Qian Wang, State University of New York, Buffalo  
Shuai Tang, State University of New York, Buffalo  
Tao Zhou, State University of New York, Buffalo  
Li Yin, State University of New York, Buffalo

## Session 730

### Event Title:

Urban Freight Parking Research: To Curb or Not To Curb

### Event Date:

Tuesday, January 13, 2015  
4:15PM - 6:00PM

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### Presiding Officers:

Ema Yamamoto, City of Philadelphia, presiding

### Sponsored By:

Transportation Issues in Major U.S. Cities (ABE30)  
Urban Freight Transportation (AT025)  
Parking Management (ABE50(1))

### Event Description:

In major cities and other urban environments, competition for the existing, limited curb space is intensifying. This poster session showcases research from around the world that uniquely examines the interaction of freight activities and on-street parking, all within the hectic, multimodal urban environment.

### Presentations:

#### Empirical Analysis of Delivery Vehicle On-Street Parking Pattern in Manhattan Area

Wei Zou, Rensselaer Polytechnic Institute  
Xiaokun (Cara) Wang, Rensselaer Polytechnic Institute  
Alison J. Conway, City College of New York  
Quanquan Chen, City College of New York

#### Empirical Investigation of Commercial Vehicle Parking Violations in New York City

Qian Wang, State University of New York, Buffalo  
Satyavardhan Gogineni, State University of New York, Buffalo



## Session 731

**Event Title:**

Current Trends in Trucking Industry Research

**Event Date:**

Tuesday, January 13, 2015  
4:15PM - 6:00PM

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**Presiding Officers:**

Stephen V. Burks, University of Minnesota, Morris, presiding

**Sponsored By:**

Trucking Industry Research (AT060)

**Presentations:****Pricing and Demand Segmentation of Bids in Truckload Combinatorial Auctions**

Rodrigo Mesa-Arango, Purdue University  
Satish V. Ukkusuri, Purdue University

**Event Title:**

Marine and Intermodal Caucus

**Event Date:**

Tuesday, January 13, 2015  
5:45PM - 7:15PM

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**Presiding Officers:**

Thomas H. Wakeman, Stevens Institute of Technology, presiding  
Barbara Ivanov, Washington State Department of Transportation, presiding

**Sponsored By:**

Freight Systems Group (AT000)  
Marine Group (AW000)

**Event Description:**

This reception provides an opportunity for those involved or interested in marine and freight transportation to meet or get reacquainted with individuals from industry, government, and academia. A no-host bar will be provided.

## Session 755

**Event Title:**

Characteristics of Pedestrian Interactive Behaviors under the Different Level of Service on Walkways

**Event Date:**

Tuesday, January 13, 2015  
7:30PM - 9:30PM

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**Presiding Officers:**

Tarek Sayed, University of British Columbia, Canada, presiding

**Sponsored By:**

Pedestrians (ANF10)

**Presentations:****Investigation of Factors Affecting Pedestrian Crossing Speeds at Signalized Intersections**

Weizhe Yu, Polytechnic Institute of New York University  
Weili Yang, Polytechnic Institute of New York University  
H. Joon Park, New York City Department of Transportation  
Elena S. Prassas, Polytechnic Institute of New York University  
Roger P. Roess, Polytechnic Institute of New York University

Wednesday

# 01/14/15

## Session 760

**Event Title:**

Innovative Transportation Workforce Development Models

**Event Date:**

Wednesday, January 14, 2015  
8:00AM - 9:45AM

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**Presiding Officers:**

Victoria F. Beale, Ohio Department of Transportation, presiding

**Sponsored By:**

Transportation Education and Training (ABG20)

**Event Description:**

As more innovations are identified, transferring the proper knowledge and information becomes key for implementation. Training and education are the means by which the transfer can and does occur. This session describes new developments in how adult learners and students are being engaged to enhance their learning experiences.

**Presentations:**

**Inverted Classroom and Its Influence on Students' Attitudes Across Learning Styles: Before-and-After Study**

Ivette Cruzado, University of Puerto Rico, Mayaguez  
Edgardo M. Román, University of Puerto Rico, Mayaguez

## Session 770

**Event Title:**

New Technologies and Case Histories for Foundation Reuse and Enhancement

**Event Date:**

Wednesday, January 14, 2015  
8:00AM - 9:45AM

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**Presiding Officers:**

Frank Jalinoos, Federal Highway Administration, presiding  
Silas C. Nichols, Federal Highway Administration, presiding

**Sponsored By:**

Low-Volume Roads (AFB30)  
Soil and Rock Properties (AFP30)  
Transportation Earthworks (AFS10)  
Soils and Rock Instrumentation (AFS20)  
Foundations of Bridges and Other Structures (AFS30)  
Subsurface Soil-Structure Interaction (AFS40)

**Presentations:**

**Case Studies on Reuse of Bridge Foundations**

Anil Agrawal, City University of New York, Staten Island  
Mohammed A. Mulla, North Carolina Department of Transportation  
Shunyi Christopher Chen, North Carolina Department of Transportation  
Ehssan Hoomaan, City University of New York, Staten Island

## Session 772

**Event Title:**

The Effects of Weather on Mobility and Roadway Conditions

**Event Date:**

Wednesday, January 14, 2015  
8:00AM - 9:45AM

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**Presiding Officers:**

Laura Fay, Montana State University, Bozeman, presiding

**Sponsored By:**

Surface Transportation Weather (AH010)

**Event Description:**

From urban to rural areas, the effects of weather on travel can be seen throughout the world. These papers deal with the influence that weather has on mobility from traffic performance to crash reduction.

**Presentations:****A Validation of Inclement Weather Traffic Models in Buffalo, New York**

Andrew Bartlett, State University of New York, Buffalo

Anna Racz, State University of New York, Buffalo

Adel W. Sadek, State University of New York, Buffalo

**Modeling the Impacts of Inclement Weather on Freeway Traffic Speed:****An Exploratory Study Utilizing Social Media Data**

Lei Lin, State University of New York, Buffalo

Ming Ni, State University of New York at Buffalo

Qing He, State University of New York, Buffalo

Jing Gao, State University of New York at Buffalo

Adel W. Sadek, State University of New York, Buffalo

## Session 784

**Event Title:**

Innovations in Travel Surveys

**Event Date:**

Wednesday, January 14, 2015  
8:30AM - 10:15AM

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**Presiding Officers:**

Guy Rousseau, Atlanta Regional Commission, presiding

**Sponsored By:**

Travel Survey Methods (ABJ40)

**Presentations:****Travel Mode Identification with Smartphones**

Xing Su, The City College of the City University of New York/CUNY

Hernan Andres Caceres Venegas, State University of New York, Buffalo

Hanghang Tong, Arizona State University

Qing He, State University of New York, Buffalo

## Session 785

**Event Title:**

Travel Demand Models R Us  
Poster Session

**Event Date:**

Wednesday, January 14, 2015  
8:30AM - 10:15AM

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**Presiding Officers:**

Jeremy Raw, Federal Highway Administration, presiding

**Sponsored By:**

Transportation Demand Forecasting (ADB40)

**Presentations:****Inference of Activity Pattern Trajectories Using Passive Data**

Mahdieh Allahviranloo, City College of New York

Will Recker, University of California, Irvine

**Understanding Household Priorities when Scheduling Activities**

Robert Regue, University of California, Irvine

Mahdieh Allahviranloo, City College of New York

Will Recker, University of California, Irvine

**Constructing Full-Day Feasible Space-Time Polyhedron Using Activity-Based Space-Time Prisms**

Jee Eun Kang, State University of New York, Buffalo

## Session 786

**Event Title:**

Contemporary Research in Land Use and Transportation Planning

**Event Date:**

Wednesday, January 14, 2015  
8:30AM - 10:15AM

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**Presiding Officers:**

Noreen McDonald, University of North Carolina, Chapel Hill, presiding

**Sponsored By:**

Transportation and Land Development (ADD30)  
Eminent Domain and Land Use (AL060)

**Presentations:****Multinomial Logistic Regression for Land Use Classification with Remote Sensing**

Qian Wang, State University of New York, Buffalo  
Shuai Tang, State University of New York, Buffalo  
Xiao Chen, State University of New York, Buffalo  
Le Wang, State University of New York, Buffalo

**Effects of Jobs-Residence Balance on Commuting Patterns:****Differences in Employment Sectors and Urban Forms**

Dapeng Zhang, Rensselaer Polytechnic Institute  
Xiaokun (Cara) Wang, Rensselaer Polytechnic Institute

## Session 787

**Event Title:**

Structural and Functional Performance of Flexible Pavements

**Event Date:**

Wednesday, January 14, 2015  
8:30AM - 10:15AM

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**Presiding Officers:**

M. Zia Alavi, University of California, Davis, presiding  
Menna Noureldin, Purdue University, presiding

**Sponsored By:**

Flexible Pavement Design (AFD60)  
Strength and Deformation Characteristics of Pavement Sections (AFD80)

**Presentations:****Evaluation of Nonconventional Surface-Initiated Transverse Cracking**

Shihui Shen, Pennsylvania State University  
Weiguang Zhang, Washington State University  
Hao Wang, Rutgers University  
Haifang Wen, Washington State University  
Shenghua Wu, Washington State University

**Evaluation of Flexible Pavement Performance due to Variations in Aggregate Base Layer Properties**

Hao Wang, Rutgers University  
Maoyun Li, Rutgers University

## Session 790

**Event Title:**

Truck and Bus Safety

**Event Date:**

Wednesday, January 14, 2015  
8:30AM - 10:15AM

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**Presiding Officers:**

Brenda Lantz, North Dakota State University, presiding

**Sponsored By:**

Truck and Bus Safety (ANB70)

**Presentations:****Impact of Truck-Auto Separation on Crash Severity**

Hong Yang, New York University  
Kaan Ozbay, New York University  
Kun Xie, New York University

**Investigating Temporal Effects on Truck Accident Occurrences in Manhattan**

Robyn Marquis, Rensselaer Polytechnic Institute  
Xiaokun (Cara) Wang, Rensselaer Polytechnic Institute

**Truck Accident Severity in New York City: Investigation of Spatiotemporal Effects and Vehicle Weight**

Wei Zou, Rensselaer Polytechnic Institute  
Xiaokun (Cara) Wang, Rensselaer Polytechnic Institute  
Dapeng Zhang, Rensselaer Polytechnic Institute

## Session 792

**Event Title:**

Contemporary Issues in International Trade and Transportation

**Event Date:**

Wednesday, January 14, 2015  
8:30AM - 10:15AM

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**Presiding Officers:**

Katina Gad, North Carolina State University, presiding

**Sponsored By:**

International Trade and Transportation (AT020)

**Presentations:****Impact of International Crises on Maritime Transportation-Based Global Value Chains**

Rodrigo Mesa-Arango, Purdue University  
Badri Narayanan, Purdue University  
Satish V. Ukkusuri, Purdue University

## Session 796

**Event Title:**

Changes in Gender Roles Related to Household Travel and Time Use

**Event Date:**

Wednesday, January 14, 2015  
10:15AM - 12:00PM

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**Presiding Officers:**

Cristina Marolda, European Commission, Belgium, presiding

**Sponsored By:**

Women's Issues in Transportation (ABE70)

**Event Description:**

Are you curious to know about changes in travel characteristics and household activity trends? Who is spending more time commuting? Who spends more time taking care of the kids? Who does the chores? How has these trends changed in recent years? What trade-offs are being made to accommodate life-work balance in households? This session will provide some insight on these trends and will posit ideas for further thought on how we can continue to improve the quality of life for all members of society

**Presentations:****A helping hand: Analyzing time use and travel in three-generation households**

Kelcie Ralph, University of California, Los Angeles

Michael Smart, Rutgers University

Brian D. Taylor, University of California, Los Angeles

**Sex or sexuality: Exploring household labor and travel among gay, lesbian, and straight households**

Michael Smart, Rutgers University

Anne E. Brown, University of California, Los Angeles

Brian D. Taylor, University of California, Los Angeles

## Session 799

**Event Title:**

Data Needs for the Future – The Big Picture

**Event Date:**

Wednesday, January 14, 2015  
10:15AM - 12:00PM

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**Presiding Officers:**

Adella Santos, Federal Highway Administration, presiding

**Sponsored By:**

National Transportation Data Requirements and Programs (ABJ10)

Urban Transportation Data and Information Systems (ABJ30)

Travel Survey Methods (ABJ40)

Task Force on Understanding New Directions for the National Household

Travel Survey (ABJ45T)

**Event Description:**

This panel session fosters discussion around the context of travel behavior changes: How do we expect the way people live, work, and use technology to influence their travel? The panelists will focus on A) important trends to keep in mind as we move through the next 3-5 years; B) What is important to know from NHTS respondents about these issues; and C) What questions is the NHTS designed/intended/expected to answer? For those questions not really suited for the NHTS, what are the alternatives?

**Presentations:****Discussant**

Nancy McGuckin, Consultant

Daniel G. Chatman, University of California, Berkeley

## Session 808

**Event Title:**

New Technologies for Foundation Reuse and Enhancement: Lake Mary Road Bridge, Arizona

**Event Date:**

Wednesday, January 14, 2015  
10:15AM - 12:00PM

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**Presiding Officers:**

Scott A. Anderson, Federal Highway Administration, presiding

**Sponsored By:**

Low-Volume Roads (AFB30)  
Soil and Rock Properties (AFP30)  
Transportation Earthworks (AFS10)  
Soils and Rock Instrumentation (AFS20)  
Foundations of Bridges and Other Structures (AFS30)  
Subsurface Soil-Structure Interaction (AFS40)

**Presentations:****Load Testing for Reuse of Lake Mary Bridge Foundation**

Masoud Sanayei, Tufts University  
Sayed M. Sayed, GCI Incorporated  
Anil Agrawal, City University of New York, Staten Island  
Ahmet Emin Aktan, Drexel University  
Nathan T. Davis, Tufts University

## Session 815

**Event Title:**

Advances in Technology, Facilities, and Operations for Winter Maintenance

**Event Date:**

Wednesday, January 14, 2015  
10:15AM - 12:00PM

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**Presiding Officers:**

Michael Fitch, Virginia Department of Transportation, presiding

**Sponsored By:**

Winter Maintenance (AHD65)

**Presentations:****Optimization of Vehicle Routing and Scheduling for Winter Road Maintenance Considering Travel Time Variability**

Haifeng Yu, New Jersey Institute of Technology  
I-Jy Chien, New Jersey Institute of Technology

## Session 818

**Event Title:**

The Vision and Potential Impacts of Automated Transit Systems in the United States

**Event Date:**

Wednesday, January 14, 2015  
10:15AM - 12:00PM

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**Presiding Officers:**

Walter Kulyk, Retired from FTA, presiding

**Sponsored By:**

Automated Transit Systems (AP040)

**Event Description:**

This Session will discuss the vision and potential impacts of automated transit systems in the United States from the perspective of a private sector consultant, two non-profit research organization leaders, and the Federal Transit Administration. The session will address automated bus technology, automated transit networks, and automated systems to provide passengers with effective connections at the beginning or end of their fixed guideway rail trip.

**Presentations:****The Future of Automated Transit Technology and Its Positive Impact on Transit Operations**

Alain L. Kornhauser, Princeton University

## Session 822

**Event Title:**

China's World Trade Perspective

**Event Date:**

Wednesday, January 14, 2015  
10:15AM - 12:00PM

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**Presiding Officers:**

Shmuel Yahalom, SUNY Maritime College, presiding

**Sponsored By:**

International Trade and Transportation (AT020)  
Marine Environment (AW030)

## Session 841

**Event Title:**

Social Networks and  
Activity-Travel Behavior

**Event Date:**

Wednesday, January 14, 2015  
2:45PM - 4:30PM

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**Presiding Officers:**

Juan Carlos Carrasco Giménez, Universidad de Málaga, Spain, presiding

**Sponsored By:**

Traveler Behavior and Values (ADB10)

**Presentations:****Exploring Effects of Social Ties on Joint Trip Frequency:****Egocentric Social Network Approach**

Arif Mohaimin Sadri, Purdue University

Seungyoon Lee, Purdue University

Satish V. Ukkusuri, Purdue University

## Session 842

**Event Title:**

Dynamics in Travel Behavior  
Analysis and Modeling

**Event Date:**

Wednesday, January 14, 2015  
2:45PM - 4:30PM

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**Presiding Officers:****Sponsored By:**

Traveler Behavior and Values (ADB10)

**Presentations:****On the Problem of Measuring Discount Rates in Intertemporal Transportation Choices**

Ricardo A. Daziano, Cornell University

Chen Wang, Cornell University

## Session 843

**Event Title:**

GPS and Smartphone Tracking  
of Travel Behavior

**Event Date:**

Wednesday, January 14, 2015  
2:45PM - 4:30PM

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**Presiding Officers:**

Floriea Di Ciommo, Universidad Politécnica de Madrid, Spain, presiding

**Sponsored By:**

Women's Issues in Transportation (ABE70)

**Presentations:****On Making More Efficient Location Prediction**

Menglin Wang, Cambridge Systematics, Inc.

Cynthia Chen, University of Washington

Jingtao Ma, Mygistics Inc.

**Time-of-Day Dependence of Location Variability:****Application of Passively Generated Mobile Phone Data Set**

Menglin Wang, Cambridge Systematics, Inc.

Cynthia Chen, University of Washington

Jingtao Ma, Mygistics Inc.



## Session 844

### Event Title:

Activity and Travel Behavior

### Event Date:

Wednesday, January 14, 2015  
2:45PM - 4:30PM

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### Presiding Officers:

Eric J. Miller, University of Toronto, Canada, presiding

### Sponsored By:

Traveler Behavior and Values (ADB10)

### Presentations:

#### Value of Reliability by Time of Day: Evidence from Actual Usage Data from SR-167 HOT Lanes

Ender Faruk Morgul, New York University  
Kaan Ozbay, New York University

## Session 845

### Event Title:

Technology, Time Use, and Travel

### Event Date:

Wednesday, January 14, 2015  
2:45PM - 4:30PM

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### Presiding Officers:

Xianbiao Hu, Metropia Inc., presiding

### Sponsored By:

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

### Event Description:

This session includes posters on topics such as telecommuting, e-shopping, use of data from social media, and the impacts of new traveler information systems.

### Presentations:

#### Location Contexts of User Check-ins to Model Geo Lifestyle Patterns

Samiul Hasan, Commonwealth Scientific and Industrial Research Organization, Australia  
Satish V. Ukkusuri, Purdue University

#### Empirical Application of Expenditure Diary Instrument to Quantify Relationships Between In-store and Online Grocery Shopping: Case Study of Greater London

Esra Suel, Imperial College London, United Kingdom  
Scott Le Vine, SUNY New Paltz and Imperial College London, United Kingdom  
John W. Polak, Imperial College London, United Kingdom

## Session 846

### Event Title:

Networking Modeling

### Event Date:

Wednesday, January 14, 2015  
2:45PM - 4:30PM

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### Presiding Officers:

Elise Miller-Hooks, University of Maryland, College Park, presiding

### Sponsored By:

Transportation Network Modeling (ADB30)

### Presentations:

#### Continuous-time Instantaneous Dynamic User Equilibria on A Real World Traffic Network (15-1652)

Rui Ma, University of California, Davis  
Xuegang (Jeff) Ban, Rensselaer Polytechnic Institute

#### Modeling Mixed Equilibria in Transportation Networks with Link Constraints (15-5300)

Xia Yang, Rensselaer Polytechnic Institute  
Rui Ma, University of California, Davis  
Xuegang (Jeff) Ban, Rensselaer Polytechnic Institute

#### Surrogate Optimization Techniques for Solving Discrete Transportation Network Design Problems (15-1449)

Omid M. Rouhani, Cornell University  
Juliane Müeller, Cornell University  
H. Oliver Gao, Cornell University  
Christine Shoemaker, Cornell University  
Eric Jun Wang, Cornell University

Thursday

# 01/15/15

## Workshop 861

**Event Title:**

Tools for Evaluating Greenhouse Gas Reduction Strategies

**Event Date:**

Thursday, January 15, 2015  
8:00AM - 12:00PM

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**Presiding Officers:**

Robert Chamberlin, RSG, presiding

**Sponsored By:**

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

**Event Description:**

With growing interest in tools for evaluating transportation-based greenhouse gas (GHG) emissions, such emissions are becoming part of the MPO and DOT planning process at multiple levels—from corridor planning and transportation improvement plans to statewide climate action plans. In response, several software tools have been developed to meet the needs of these plans. This workshop illustrates the capacity of these tools to broaden and simplify analysis. Workshop Objective: There is growing interest in tools and data for evaluating transportation-based greenhouse gas emissions. GHG emissions are becoming part of the MPO and DOT planning process at multiple levels -- from corridor planning and Transportation Improvement Plans to statewide Climate Action Plans. In response, several software tools and data sources have been developed to meet these needs. The purpose of this workshop is to illustrate the capacity of these tools to broaden and simplify analysis. This workshop is targeted to practitioners, which includes analysts and policymakers who can use the output and insights from these tools to make decisions.

**Presentations:**

**Estimating Life-Cycle Emissions from Transportation Construction Projects: New Jersey's GASCAP Model**  
Robert B. Noland, Rutgers University

**Wrap-Up - Synthesis of Workshop**

Robert B. Noland, Rutgers University

## Workshop 866

**Event Title:**

Status of Long-Term Bridge Performance Program

**Event Date:**

Thursday, January 15, 2015  
8:00AM - 12:00PM

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**Presiding Officers:**

Susan Nancy Lane, Federal Highway Administration, presiding  
Hamid Ghasemi, Federal Highway Administration, presiding

**Sponsored By:**

Structures Maintenance (AHD30)

**Event Description:**

Presentations in this workshop provide a snapshot of various activities in FHWA's Long-Term Bridge Performance Program, including outreach activities and highlights of current findings. The long-term data collection phase is described in detail, and initial information is provided on clusters in the sample population of bridges by bridge type and location.

**Presentations:**

**Data Driven Models - Closing the Gap**  
Robert Zobel, Federal Highway Administration  
Ali Maher, Rutgers University



**UNIVERSITY TRANSPORTATION RESEARCH CENTER - REGION 2**