



National University Rail Center



Guide to Presentations TRB 94th Annual Meeting Washington, D.C. January 11-15, 2015

NURail Center Partners:

University of Illinois, Urbana-Champaign
University of Illinois, Chicago
Massachusetts Institute of Technology
Michigan Technological University
University of Kentucky
University of Tennessee, Knoxville
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Rail Focused US DOT OST-R Tier 1 University Transportation Center

University of Illinois, Urbana-Champaign

- 1. Cost and Delay of Railroad Timber and Concrete Crosstie Maintenance and Replacement**
Alexander Hale Lovett, University of Illinois, Urbana-Champaign

- 2. A Comprehensive Tack Coat Study: Theory and Lab Development, APT Verification, Field Validation, and State Implementation**
Imad L. Al-Qadi, University of Illinois, Urbana-Champaign

- 3. Moving Crude Oil by Rail: Energy Sector Development Patterns, Railroad Developments, Risk Analysis, and Tank Car Issues**
Graham Brisben, Professional Logistics Group, Inc.
Matthew K. Rose, BNSF Railway Company
Christopher P. L. Barkan, University of Illinois, Urbana-Champaign
Thomas D. Simpson, Railway Supply Institute

- 4. Reference Document: Construction**
Imad L. Al-Qadi, University of Illinois, Urbana-Champaign

- 5. Scheduling and Routing of Service Trucks and Planning of Resource Replenishment Locations for Winter Roadway Maintenance**
Leila Hajibabai, University of Illinois, Urbana-Champaign

- 6. Simple Feature-Based Function Approximation for Reinforcement Learning Traffic Signals in Oversaturated Networks**
Juan C. Medina, University of Illinois, Urbana-Champaign
Rahim F. Benekohal, University of Illinois, Urbana-Champaign

- 7. Ballast Settlement Ramp to Mitigate Differential Settlement in a Bridge Transition Zone**
Yu Qian, University of Illinois, Urbana-Champaign
Erol Tutumluer, University of Illinois, Urbana-Champaign
Youseff Hashash, University of Illinois, Urbana-Champaign
Jamshid Ghaboussi, University of Illinois, Urbana-Champaign
David D. Davis, Transportation Technology Center, Inc.

- 8. Tie-Ballast Interaction at Railroad Transitions**
Stephen Wilk, University of Illinois at Urbana-Champaign
Timothy D. Stark, University of Illinois, Urbana-Champaign
Theodore R. Sussmann, Volpe National Transportation Systems Center

- 9. Quantifying Lateral Wheel Loading Variation Using Truck Performance Detectors**
Andrew Scheppe, University of Illinois at Urbana-Champaign
J. Riley Edwards, University of Illinois, Urbana-Champaign
Marcus S. Dersch, University of Illinois, Urbana-Champaign

Christopher P. L. Barkan, University of Illinois, Urbana-Champaign

10. Examination of the Effect of Concrete Crosstie Rail Seat Deterioration on Rail Seat Load Distribution

Matthew Greve, University of Illinois at Urbana-Champaign
Marcus S. Dersch, University of Illinois, Urbana-Champaign
J. Riley Edwards, University of Illinois, Urbana-Champaign
Christopher P. L. Barkan, University of Illinois, Urbana-Champaign
Hugh B. Thompson, II, Federal Railroad Administration
Theodore R. Sussmann, Volpe National Transportation Systems Center
Michael McHenry, Transportation Technology Center, Inc.

11. Flexural Analysis of Prestressed Concrete Monoblock Crossties: Comparison of Current Methodologies and Sensitivity to Support Conditions

Henry E. Wolf, University of Illinois, Urbana-Champaign
Steve Mattson, voestalpine Nortrak Incorporated
J. Riley Edwards, University of Illinois, Urbana-Champaign
Marcus S. Dersch, University of Illinois, Urbana-Champaign
Christopher P. L. Barkan, University of Illinois, Urbana-Champaign

12. Chemical and Expansive Properties of Steel Furnace Slag Reclaimed Asphalt Pavement

Alexander Sebastian Brand, University of Illinois, Urbana-Champaign
Jeffery R. Roesler, University of Illinois, Urbana-Champaign

13. Characterization of Particle Shape and Asphalt Coating in Reclaimed Asphalt Pavement Using Advanced Image Processing Techniques

Maziar Moaveni, University of Illinois, Urbana-Champaign
Sedat Cetin, Afyon Kocatepe University, Turkey
Alexander Sebastian Brand, University of Illinois, Urbana-Champaign
Sachindra Dahal, University of Illinois, Urbana-Champaign
Jeffery R. Roesler, University of Illinois, Urbana-Champaign
Erol Tutumluer, University of Illinois, Urbana-Champaign

14. Bus Frequency Optimization Based on Uncertain Travel Time and Fixed Capacity

Xiasen Wang, University of Illinois, Urbana-Champaign
Yang Zhou, University of Illinois, Urbana-Champaign
Qinghui Nie, Southeast University, China
Xinlu Liu, University of Illinois, Urbana-Champaign

15. Overlay Thickness Design for Low-Volume Roads: Mechanistic-Empirical Approach with Nondestructive Deflection Testing and Pavement Damage Models

Priyanka Sarker, University of Illinois, Urbana-Champaign
Debakanta Mishra, Boise State University
Erol Tutumluer, University of Illinois, Urbana-Champaign
Scott Lackey, Illinois Department of Transportation

16. Field Performance Evaluations of Nontraditional Aggregates for Subgrade Replacement and Subbase over Weak Soils

Hasan Ahmed Kazmee, University of Illinois, Urbana-Champaign
Debakanta Mishra, Boise State University
Pengcheng Shangguan, University of Illinois, Urbana-Champaign
Erol Tutumluer, University of Illinois, Urbana-Champaign
Imad L. Al-Qadi, University of Illinois, Urbana-Champaign
Sheila Beshears, Illinois Department of Transportation

17. Impact of Thermal Inertia in Pavements and the Urban Heat Island

Sushobhan Sen, University of Illinois, Urbana-Champaign
Jeffery R. Roesler, University of Illinois, Urbana-Champaign

18. Scour Characterization due to Water Free Fall

Abdolreza Osouli, Southern Illinois University, Edwardsville
Timothy D. Stark, University of Illinois, Urbana-Champaign

19. Calibration of Car-following Laws for Traffic Oscillation Prediction

Christine Rhoades, University of Illinois, Urbana-Champaign
Xin Wang, University of Illinois, Urbana-Champaign
Yanfeng Ouyang, University of Illinois, Urbana-Champaign

20. A Coordinated Train Control Algorithm to Improve Regenerative Energy Receptivity in Metro Transit Systems

HAICHUAN TANG, University of Illinois, Urbana-Champaign
C. Tyler Dick, University of Illinois, Urbana-Champaign
Xiaoyun Feng, Southwest Jiaotong University, China

21. Methods of Analyzing and Comparing Energy Efficiency of Passenger Rail Systems

Giovanni DiDomenico, University of Illinois, Urbana-Champaign
C. Tyler Dick, University of Illinois, Urbana-Champaign

22. Concrete Slab Analyses with Field-Assigned Non-Uniform Support Conditions

Jeffery R. Roesler, University of Illinois, Urbana-Champaign
Hemant Chavan, E&I-Chicago Bridge & Iron/Dack Consulting Solutions Inc.
Daniel King, University of Illinois at Urbana-Champaign
Alexander Sebastian Brand, University of Illinois, Urbana-Champaign

23. Performance Evaluations of Unbound Aggregate Permanent Deformation Models for Different Aggregate Physical Properties

Yuanjie Xiao, University of Illinois, Urbana-Champaign
Erol Tutumluer, University of Illinois, Urbana-Champaign
Debakanta Mishra, Boise State University

24. Subgrade Soil: Important Factor in Pavement Design, Construction, and Performance

Marshall R. Thompson, University of Illinois, Urbana-Champaign

25. Sensitivity of Freight and Passenger Rail Fuel Efficiency to Infrastructure, Equipment and Operating Factors

Garrett Fullerton, University of Illinois, Urbana-Champaign

Giovanni DiDomenico, University of Illinois, Urbana-Champaign

C. Tyler Dick, University of Illinois, Urbana-Champaign

26. Dynamic Snowplow Fleet Management Under Uncertain Demand and Service Disruption

Leila Hajibabai, University of Illinois, Urbana-Champaign

Yanfeng Ouyang, University of Illinois, Urbana-Champaign

27. Grain Supply Chain Network Design and Logistics Planning for Reducing Post-Harvest Loss

Seyed Mohammad Nourbakhsh, University of Illinois, Urbana-Champaign

Yun Bai, University of Illinois, Urbana-Champaign

Guilherme Maia, University of Illinois, Urbana-Champaign

Yanfeng Ouyang, University of Illinois, Urbana-Champaign

Luis Rodriguez, University of Illinois, Urbana-Champaign

28. Traffic Volatility Forecasting for Urban Arterials: Family GARCH Approach

Yang Zhou, University of Illinois, Urbana-Champaign

Qinghui Nie, Southeast University, China

Jingxin Xia, Southeast University, China

Chengchuan An, Southeast University, China

29. Measuring Thin Pavement Layer Thickness from Ground Penetrating Radar Data Using Regularized Deconvolution Technique

Shan Zhao, University of Illinois, Urbana-Champaign

Pengcheng Shangguan, University of Illinois, Urbana-Champaign

Imad L. Al-Qadi, University of Illinois, Urbana-Champaign

30. Monitoring Density of Asphalt Pavement during Compaction with Surface Moisture Presence Using Ground Penetrating Radar

Pengcheng Shangguan, University of Illinois, Urbana-Champaign

Imad L. Al-Qadi, University of Illinois, Urbana-Champaign

Aaron Coenen, Illinois Center for Transportation

Shan Zhao, University of Illinois, Urbana-Champaign

31. Using Coarse GPS Data to Quantify City-scale Transportation System Resilience to Extreme Events

Brian Donovan, University of Illinois, Urbana-Champaign

Daniel B. Work, University of Illinois, Urbana-Champaign

32. Capacity and Level of Service Impact of Passenger Trains on Shared Rail Corridors with Multiple Types of Freight Trains

Mei-Cheng Shih, University of Illinois, Urbana-Champaign

C. Tyler Dick, University of Illinois, Urbana-Champaign
Christopher P. L. Barkan, University of Illinois, Urbana-Champaign

33. Influence of Siding Connection Length, Position, and Order on the Incremental Capacity of Transitioning from Single to Double Track

Ivan Atanassov, University of Illinois at Urbana-Champaign
C. Tyler Dick, University of Illinois, Urbana-Champaign

34. Capacity of Single-Track Railway Lines with Short Sidings to Support Operation of Long Freight Trains

Ivan Atanassov, University of Illinois at Urbana-Champaign
C. Tyler Dick, University of Illinois, Urbana-Champaign

35. Characterization and Stabilization of Quarry Byproducts for Sustainable Pavement Applications

Vincent Mwumvaneza, University of Illinois, Urbana-Champaign
Wenting Hou, University of Illinois, Urbana-Champaign
Hasan Ozer, University of Illinois, Urbana-Champaign
Erol Tutumluer, University of Illinois, Urbana-Champaign
Imad L. Al-Qadi, University of Illinois, Urbana-Champaign
Sheila Beshears, Illinois Department of Transportation

36. Macroscopic Models For Accident Prediction at Railroad Grade Crossings and Comparisons with the U.S. DOT Accident Prediction Formula

Juan C. Medina, University of Illinois, Urbana-Champaign
Rahim F. Benekohal, University of Illinois, Urbana-Champaign

37. Cost and Delay of Railroad Timber and Concrete Crosstie Maintenance and Replacement

Alexander Hale Lovett, University of Illinois, Urbana-Champaign
C. Tyler Dick, University of Illinois, Urbana-Champaign
Conrad Ruppert, University of Illinois, Urbana-Champaign
Christopher P. L. Barkan, University of Illinois, Urbana-Champaign

38. Evaluation of Tie Support at Transition Zones

Timothy D. Stark, University of Illinois, Urbana-Champaign
Stephen Wilk, University of Illinois at Urbana-Champaign
Theodore R. Sussmann, Volpe National Transportation Systems Center

39. Methodology to Determine Energy and Greenhouse Gases from Asphalt Binder Production for Various Regions in the United States

Rebekah Yang, University of Illinois, Urbana-Champaign
Hasan Ozer, University of Illinois, Urbana-Champaign
Imad L. Al-Qadi, University of Illinois, Urbana-Champaign

40. Effects of Pavement Surface Roughness and Congestion on Expected Freeway Traffic Energy Consumption

Laura E. Ghosh, University of Illinois, Urbana-Champaign
Liqun Lu, University of Illinois, Urbana-Champaign
Hasan Ozer, University of Illinois, Urbana-Champaign
Yanfeng Ouyang, University of Illinois, Urbana-Champaign
Imad L. Al-Qadi, University of Illinois, Urbana-Champaign

41. Effect of Pavement Surface Temperature Correction on Pavement-Tire Noise

Songsu Son, University of Illinois, Urbana-Champaign
Imad L. Al-Qadi, University of Illinois, Urbana-Champaign

42. Emission Mitigation via Longitudinal Control of Intelligent Vehicles in a Congested Platoon: An Exploratory Study

Zhaodong Wang, University of Illinois, Urbana-Champaign
Xiqun (Michael) Chen, Zhejiang University
Yanfeng Ouyang, University of Illinois, Urbana-Champaign
Meng Li, Tsinghua University, China

43. A Cell Transmission Model for Heterogeneous Multiclass Traffic Flow With Creeping

Shimao Fan, University of Illinois, Urbana-Champaign
Daniel B. Work, University of Illinois, Urbana-Champaign

44. Airfield Pavement Response due to Heavy Aircraft Takeoff: Advanced Modeling for Wheel Interaction Consideration

Jaime A. Hernandez, University of Illinois, Urbana-Champaign
Imad L. Al-Qadi, University of Illinois, Urbana-Champaign

45. From Yesterday's Three- and Four-Engine Airliners to Twin-Engine Airliners: Are Bird Strikes More Hazardous for Today's Twin-Engine Aircraft?

Kivanc A. Avrenli, University of Illinois, Urbana-Champaign
Barry J. Dempsey, University of Illinois, Urbana-Champaign

46. Implementation of Acoustic Emission Technique to Evaluate Embrittlement Temperatures of Asphalt Binders

Behzad Behnia, Western New England University
Eshan V. Dave, University of Minnesota, Duluth
William G. Buttlar, University of Illinois, Urbana-Champaign
Henrique Reis, University of Illinois, Urbana-Champaign

47. Rheological and Chemical Characterization of Biobinders from Different Biomass Resources

Heena Dhasmana, University of Illinois, Urbana-Champaign
Hasan Ozer, University of Illinois, Urbana-Champaign
Imad L. Al-Qadi, University of Illinois, Urbana-Champaign
Yuanhui Zhang, University of Illinois, Urbana-Champaign
Lance Schideman, University of Illinois, Urbana-Champaign

Brijendra Kumar Sharma, Illinois Sustainable Technology Center
Wan-ting Chen, University of Illinois, Urbana-Champaign
Mitchell James Minarick, University of Illinois, Urbana-Champaign
Peng Zhang, University of Illinois, Urbana-Champaign

48. Impact of Aging and Moisture Conditioning on Moisture-Susceptible Asphalt Mixtures

Ibrahim Mohammad Abuawad, University of Illinois, Urbana-Champaign
Imad L. Al-Qadi, University of Illinois, Urbana-Champaign
Hasan Ozer, University of Illinois, Urbana-Champaign

49. Implementation of Analytical Protocol for Multiaxial Viscoelastic Characterization of Asphalt Materials

Qazi Aurangzeb, Kercher Engineering, Inc.
Hasan Ozer, University of Illinois, Urbana-Champaign
Imad L. Al-Qadi, University of Illinois, Urbana-Champaign
Harry H. Hilton, University of Illinois, Urbana-Champaign

50. Prediction of Fatigue Failure at Asphalt Concrete Layer Interface from Monotonic Testing

Cristina Tozzo, Sapienza University of Rome, Italy
Antonio D'Andrea, Sapienza University of Rome, Italy
Imad L. Al-Qadi, University of Illinois, Urbana-Champaign

51. Forecasting High Speed Rail Ridership Using Aggregate Data: A Case Revisit of High Speed Rail in Taiwan

Yu-Ting Hsu, National Taiwan University (NTU)
Wei-Ren Lin, National Taiwan University (NTU)
Yung-Cheng Lai, National Taiwan University
Tsung-Chung Kao, University of Illinois, Urbana-Champaign

52. Quantification of Lateral Forces in Concrete Crosstie Fastening Systems

Brent A. Williams, University of Illinois, Urbana-Champaign
Marcus S. Dersch, University of Illinois, Urbana-Champaign
J. Riley Edwards, University of Illinois, Urbana-Champaign
Christopher P. L. Barkan, University of Illinois, Urbana-Champaign

53. Stone Blowing as a Remedial Measure Mitigating Differential Settlement at Bridge Approaches

Erol Tutumluer, University of Illinois, Urbana-Champaign
Steve Chrismer, National Railroad Passenger Corporation

54. Development of Present and Baseline Scenarios to Assess Sustainability Improvements of Illinois Tollway Pavements Using Life-Cycle Assessment Approach

Imad L. Al-Qadi, University of Illinois, Urbana-Champaign
Rebekah Yang, University of Illinois, Urbana-Champaign
Seunggu Kang, University of Illinois, Urbana-Champaign
Hasan Ozer, University of Illinois, Urbana-Champaign
Eric Charles Ferrebee, University of Illinois, Urbana-Champaign

Jeffery R. Roesler, University of Illinois, Urbana-Champaign
Alejandro Salinas, Applied Research Associates, Inc.
Joep Meijer, therightenvironment.net
William R. Vavrik, Applied Research Associates, Inc.
Steven Gillen, Illinois State Toll Highway Authority

55. Micromechanical Computational Analysis of Effective Mesoscale Response of Bituminous Materials with Moisture Presence

Ziad Ghauch, University of Illinois, Urbana-Champaign
Hasan Ozer, University of Illinois, Urbana-Champaign
Imad L. Al-Qadi, University of Illinois, Urbana-Champaign
Heena Dhasmana, University of Illinois, Urbana-Champaign

56. Evaluation of Low-Temperature Viscoelastic Properties and Fracture Behavior of Bioasphalt Mixtures

Brian Hill, University of Illinois, Urbana-Champaign
Daniel Joshua Oldham, North Carolina A&T State University
Elham H. Fini, North Carolina A&T State University
William G. Buttlar, University of Illinois, Urbana-Champaign

57. Investigation of Effectiveness of Liquid Rubber as a Modifier for Asphalt Binder

Shahrzad Hosseinneshad Mohatarami, North Carolina A&T State University
Elham H. Fini, North Carolina A&T State University
Brajendra Kumar Sharma, University of Illinois, Urbana-Champaign
Daniel Joshua Oldham, North Carolina A&T State University
Bidhya Kunwar, University of Illinois, Urbana-Champaign

58. Optimized Speed Harmonization for Work Zones with Piecewise Speed-Density Functions

Hani Ramezani, University of Illinois, Urbana-Champaign
Rahim F. Benekohal, University of Illinois, Urbana-Champaign

59. Supply Chain Design under Uncertainties and Resource Competition: A Continuum Approximation Approach

Xin Wang, University of Illinois, Urbana-Champaign
Yanfeng Ouyang, University of Illinois, Urbana-Champaign
Michael Kim Lim, University of Illinois, Urbana-Champaign

60. Urban Parking Space Management via Dynamic Performance-Based Pricing

Daniel Mackowski, SF Park
Yun Bai, University of Illinois, Urbana-Champaign
Yanfeng Ouyang, University of Illinois, Urbana-Champaign

61. FIELD AGING AND DEVELOPMENT OF AGING MODEL FOR HOT-POURED CRACK SEALANTS

Hasan Ozer, University of Illinois, Urbana-Champaign
Seyed Saleh Yousefi, University of Illinois, Urbana-Champaign

Imad L. Al-Qadi, University of Illinois, Urbana-Champaign
Guillermo Elizalde Castro, Consultora Vera y Asociados Cia. Ltda.

62. Validation of Hot-Poured Crack Sealant Performance-Based Guidelines: Field Performance Analysis

Hasan Ozer, University of Illinois, Urbana-Champaign

63. Competitive Supply Chain Network Design under Resource Constraints and Market Equilibrium

Yun Bai, University of Illinois, Urbana-Champaign

Yanfeng Ouyang, University of Illinois, Urbana-Champaign

Jong-Shi Pang, University of Illinois, Urbana-Champaign

64. Decomposition of General Facility Disruption Correlations via Augmentation of Virtual Supporting Stations

Siyang Xie, University of Illinois, Urbana-Champaign

Xiaopeng Li, Mississippi State University

Yanfeng Ouyang, University of Illinois, Urbana-Champaign

65. Supply Chain Design under Uncertainties and Resource Competition: A Continuum Approximation Approach (15-1016)

Xin Wang, University of Illinois, Urbana-Champaign

Yanfeng Ouyang, University of Illinois, Urbana-Champaign

Michael Kim Lim, University of Illinois, Urbana-Champaign

Massachusetts Institute of Technology

66. Modeling Saliency in Transportation Pricing: Optimal Mixture of Automobile Management Policies

Alyona Michel, Massachusetts Institute of Technology

Jinhua Zhao, Massachusetts Institute of Technology

67. Role of Use Phase and Pavement-Vehicle Interaction in Comparative Pavement Life-Cycle Assessment

Xin Xu, Massachusetts Institute of Technology

Jeremy Gregory, Massachusetts Institute of Technology

Randolph Kirchain, Massachusetts Institute of Technology

68. Roughness-induced Pavement-vehicle Interactions: Key Parameters And Impact On Vehicle Fuel Consumption

Arghavan Louhghalam, Massachusetts Institute of Technology

Mehdi Akbarian, Massachusetts Institute of Technology

Franz Josef Ulm, Massachusetts Institute of Technology

69. Optimizing A Flexible Mobility On Demand System

Bilge Atasoy, Massachusetts Institute of Technology

Takuro Ikeda, Fujitsu Laboratories

Moshe E. Ben-Akiva, Massachusetts Institute of Technology

70. Digitalized Transportation Data as Disruptive Innovation: Prospects in Mexico City

P. Christopher Zegras, Massachusetts Institute of Technology
Emily Eros, Massachusetts Institute of Technology
Shomik Raj Mehndiratta, World Bank

71. Agglomeration and Diversification: Bilevel Analysis of 15-Year Impacts of Madrid-Seville High-Speed Rail

Yu Shen, Instituto Superior Técnico, Portugal
Jinhua Zhao, Massachusetts Institute of Technology
João de Abreu e Silva, Instituto Superior Técnico, Portugal
Luis Miguel Garrido Martinez, International Transport Forum, France

72. Probabilistic Safety Analysis using Traffic Microscopic Simulation

Carlos Lima Azevedo, Singapore-MIT Alliance for Research and Technology
João Lourenço Cardoso, National Laboratory for Civil Engineering, Portugal
Moshe E. Ben-Akiva, Massachusetts Institute of Technology

73. An integrated stop-mode detection algorithm for real world smartphone-based travel survey

Ajinkya Ranjeet Ghorpade, Singapore-MIT Alliance for Research and Technology
Francisco C. Pereira, Massachusetts Institute of Technology
Fang Zhao, Singapore-MIT Alliance for Research and Technology
P. Christopher Zegras, Massachusetts Institute of Technology
Moshe E. Ben-Akiva, Massachusetts Institute of Technology

74. SimMobility Mid-Term Simulator: A State of the Art Integrated Agent Based Demand and Supply Model (15-3937)

Yang Lu, Singapore-MIT Alliance for Research and Technology
Muhammad Adnan, Singapore-MIT Alliance for Research and Technology
Kakali Basak, Singapore-MIT Alliance for Research and Technology
Francisco C. Pereira, Massachusetts Institute of Technology
Carlos Carrion, Massachusetts Institute of Technology
Vahid Hamishagi Saber, Singapore-MIT Alliance for Research and Technology
Harish Loganathan, Singapore-MIT Alliance for Research and Technology
Moshe E. Ben-Akiva, Massachusetts Institute of Technology

75. Activity Pattern Models with Well-Being Indicators (15-3714)

Carlos Carrion, Massachusetts Institute of Technology
Annesha Enam, University of Connecticut
Varun Pattabhiraman, Massachusetts Institute of Technology
Maya Abou-Zeid, American University of Beirut, Lebanon
Moshe E. Ben-Akiva, Massachusetts Institute of Technology

76. Dealing with Uncertainty in Detailed Calibration of Traffic Simulation Models for Safety Assessment

Carlos Lima Azevedo, Singapore-MIT Alliance for Research and Technology

Biagio Ciuffo, European Commission Joint Research Centre, Italy
Filipe Moura, Instituto Superior Técnico, Portugal
João Lourenço Cardoso, National Laboratory for Civil Engineering, Portugal
Moshe E. Ben-Akiva, Massachusetts Institute of Technology

77. Car Pride: Psychological Structure and Behavioral Implications

Zhan Zhao, Massachusetts Institute of Technology
Jinhua Zhao, Massachusetts Institute of Technology

78. Humanizing Travel: How E-hail Apps Transform Stakeholder Relationships in the U.S. Taxi Industry

Corinna Li, Massachusetts Institute of Technology
Jinhua Zhao, Massachusetts Institute of Technology

79. Latent-Class Routing Policy Choice Model with Revealed-Preference Data

Jing Ding, University of Massachusetts, Amherst
Song Gao, University of Massachusetts, Amherst
Erik Jenelius, KTH Royal Institute of Technology, Sweden
Mahmood Rahmani, KTH Royal Institute of Technology, Sweden
Francisco C. Pereira, Massachusetts Institute of Technology
Moshe E. Ben-Akiva, Massachusetts Institute of Technology

80. The Impact Of Repeated Exposure To A Multi-level Working Memory Task On Physiological Arousal And Driving Performance

Daniel Belyusar, Massachusetts Institute of Technology
Bruce Mehler, Massachusetts Institute of Technology
Erin Solovey, Drexel University
Bryan Reimer, Massachusetts Institute of Technology

81. Public Transport Policies in Beijing: "Success and Failures"

Jinhua Zhao, Massachusetts Institute of Technology

82. Analysis of Potential Implementations of Pushback Rate Control at LaGuardia Airport

Hector Fornes Martinez, Massachusetts Institute of Technology
Hamsa Balakrishnan, Massachusetts Institute of Technology

83. Probabilistic Life-Cycle Cost Analysis of Pavements: Drivers of Variation and Implications of Context

Omar Sweij, Massachusetts Institute of Technology
Jeremy Gregory, Massachusetts Institute of Technology
Randolph Kirchain, Massachusetts Institute of Technology

84. Integrated Real-Time Transit Signal Priority Control for High-Frequency Transit Service

Felipe Delgado, Pontificia Universidad Católica de Chile
Juan Carlos Munoz, Pontificia Universidad Católica de Chile
Ricardo Giesen, Pontificia Universidad Católica de Chile

85. Methodology for Assessing Bus Delay in Mixed Traffic to Identify Pinpoint Transit Priority Improvement Locations in Cambridge, Massachusetts

Jeffrey Rosenblum, Massachusetts Institute of Technology
Duncan White Allen, IBI Group
Tegin Teich Bennett, City of Cambridge, Massachusetts
Ritesh Warade, IBI Group
Cleo Stoughton, Northeastern University

86. Analyzing the Financial Relationship between Railway Industry Players in a Vertically-Separated Environment: The Train Operator's Perspective

Samuel Joseph Levy, Massachusetts Institute of Technology
Maite Pena-Alcaraz, Massachusetts Institute of Technology
Aleksandr Prodan, Instituto Superior Técnico, Portugal
Joseph M. Sussman, Massachusetts Institute of Technology

87. Exploratory Analysis of a Smartphone-Based Travel Survey in Singapore

Fang Zhao, Singapore-MIT Alliance for Research and Technology
Francisco C. Pereira, Massachusetts Institute of Technology
Rudi Ball, Massachusetts Institute of Technology
Youngsung Kim, Massachusetts Institute of Technology
Yafei Han, Massachusetts Institute of Technology
P. Christopher Zegras, Massachusetts Institute of Technology
Moshe E. Ben-Akiva, Massachusetts Institute of Technology

88. Price as a Signal for Policy Fine-tuning

Marisol Andrea Castro, University of Texas, Austin
Jinhua Zhao, Massachusetts Institute of Technology

89. Network Analysis of Virginia's Interstate Pavement-Vehicle Interactions: Mapping of Roughness and Deflection-Induced Excess Fuel Consumption

Mehdi Akbarian, Massachusetts Institute of Technology
Arghavan Louhghalam, Massachusetts Institute of Technology
Sameer S. Shetty, Virginia Department of Transportation
Franz Josef Ulm, Massachusetts Institute of Technology

90. Activity Pattern Models with Well-being Indicators

Carlos Carrion, Massachusetts Institute of Technology
Annesha Enam, University of Connecticut
Varun Pattabhiraman, Massachusetts Institute of Technology
Maya Abou-Zeid, American University of Beirut, Lebanon
Moshe E. Ben-Akiva, Massachusetts Institute of Technology

91. Analyses of Glance Patterns of Older and Younger Drivers During Visual-Manual Human-Machine Interface Interaction

Joonbum Lee, Massachusetts Institute of Technology
Bryan Reimer, Massachusetts Institute of Technology
Bruce Mehler, Massachusetts Institute of Technology
Linda S. Angell, Touchstone Evaluations, Inc.
Bobbie Danielle Seppelt, University of Iowa
Joseph F. Coughlin, Massachusetts Institute of Technology

92. Simulation-based Adaptive Traffic Signal Control Algorithm

Xiao Chen, University of Coimbra, Portugal
Carolina Osorio, Massachusetts Institute of Technology
Michael Marsico, New York City Department of Transportation
Mohamad A. Talas, New York City Department of Transportation
Jingqin Gao, New York City Department of Transportation
Shitao Zhang, New York City Department of Transportation

93. Event-Driven Holding Control for High-Frequency Transit

Gabriel Eduardo Sánchez-Martínez, Massachusetts Institute of Technology
Haris N. Koutsopoulos, Northeastern University
Nigel H. M. Wilson, Massachusetts Institute of Technology

94. D-Efficient or Deficient? A Robustness Analysis of SP Experimental Designs in a VOT Estimation Context

Joan L. Walker, University of California, Berkeley
Yanqiao Wang, UC Berkeley
Mikkel Thorhauge, DTU Transport, Denmark
Moshe E. Ben-Akiva, Massachusetts Institute of Technology

Michigan Technological University

95. Demonstrations for Implementation of the Unsurfaced Road Condition Assessment System

Richard Dobson, Michigan Tech Research Institute
Colin Neil Brooks, Michigan Technological University
Chris Roussi, Michigan Tech Research Institute
Timothy K. Colling, Michigan Technological University
David Dean, Michigan Tech Research Institute
Valerie D. Lefler, University of Nebraska, Lincoln

96. Sustainable Geotechnical Asset Management along the Transportation Infrastructure Environment Using Remote Sensing

Thomas Oommen, Michigan Technological University
Richard Dobson, Michigan Tech Research Institute
Adrian Bohane, TRE Canada Inc.
Colin Neil Brooks, Michigan Technological University
Stanley James Vitton, Michigan Technological University
Keith Cunningham, University of Alaska Fairbanks
Pasi Tapio Lautala, Michigan Technological University

97. Self-powered vibration measurement for bridge scour monitoring

Ye Sun, Michigan Technological University
R. Andrew Swartz, Michigan Technological University
TING BAO, Michigan Technological University
Zhen Liu, Michigan Technological University

98. Sensing Technologies Subcommittee

Colin Neil Brooks, Michigan Technological University, presiding

99. Physicochemical Behavior of Soils and Industrial Byproducts

Zhen Liu, Michigan Technological University, presiding
Angelica M. Palomino, University of Tennessee, Knoxville, presiding

100. Aggregate Numerical Representation Construction Using Ball Growth Model Based on Realistic Aggregate Shapes

Xu Yang, Michigan Technological University
Zhanping You, Michigan Technological University
Can Jin, Hefei University of Technology, China
Hainian Wang, Chang'an University, China

101. A Fiber-Based Model for Seismic Performance of Reinforced Concrete Bridge Piers with Reinforcing Bar Corrosion

Chao Zhang, Michigan Technological University
Peng Deng, Colorado School of Mines
Zhen Liu, Michigan Technological University

102. The Future of Domestic Intermodal Freight Transportation

Pasi Tapio Lautala, Michigan Technological University, presiding

103. Capacity Evaluation Of Directional And Non-directional Operational Scenarios Along A Multiple-track U.S. Corridor

Hamed Pouryousef, Michigan Technological University
Pasi Tapio Lautala, Michigan Technological University

104. A Bayesian Adaptive Inference Approach to Estimating Heterogeneous Gap Acceptance Functions

Juanping Zhu, Yunnan University, China
Kuilin Zhang, Michigan Technological University

105. POLARIS: Agent-Based Modeling Framework Development and Implementation for Integrated Travel Demand and Network and Operations Simulations

Joshua Auld, Argonne National Laboratory
Michael B. Hope, Argonne National Laboratory
Hubert Ley, Argonne National Laboratory
Vadim Sokolov, Argonne National Laboratory
Bo Xu, Nokia

Kuilin Zhang, Michigan Technological University

106. Rethinking Bridge Scour Detection Using the Natural Frequency: Numerical Insights

TING BAO, Michigan Technological University

R. Andrew Swartz, Michigan Technological University

Stanley James Vitton, Michigan Technological University

Ye Sun, Case Western Reserve University

Zhen Liu, Michigan Technological University

107. Empirical assessment of Pavement Roughness to Estimate pavement life cycle Use-Phase Emissions

Benjamin T. Ciavola, Life Cycle Solutions, LLC

Amlan Mukherjee, Michigan Technological University

108. Optimizing Multi-Layer Merge-In-Transit Supply Chains

Dengfeng Yang, Infor

Kuilin Zhang, Michigan Technological University

109. Multiscale modeling of fracture-healing performance of asphalt mixture system

Qingli Dai, Michigan Technological University

110. Polaris: Agent-Based Modeling Framework Development and Implementation for Integrated Travel Demand and Network and Operations Simulations (15-5072)

Joshua Auld, Argonne National Laboratory

Michael B. Hope, Argonne National Laboratory

Hubert Ley, Argonne National Laboratory

Vadim Sokolov, Argonne National Laboratory

Bo Xu, Argonne National Laboratory

Kuilin Zhang, Michigan Technological University

111. Optimizing Multi-Layer Merge-In-Transit Supply Chains (15-1937)

Dengfeng Yang, Infor

Kuilin Zhang, Michigan Technological University

University of Illinois, Chicago

112. Walking Access to Transit Stations: Evaluating Barriers Using Stated Preference

Nebiyou Yonas Tilahun, University of Illinois, Chicago

Moyin Li, University of Illinois, Chicago

113. See Spot Taxed: The Global Experience with Parking Levies

Ana Martha Legorreta, University of Illinois at Chicago

Greg Newmark, Center for Neighborhood Technology

Gregory L. Newmark, Center for Neighborhood Technology

114. Environmental Justice in Transportation

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

115. Changes in Containerized Freight Distribution by Capacity Increase on the Maritime Network into the United States

Sanghyeon Ko, University of Illinois, Chicago
Jaehoon Kim, University of Alabama, Huntsville
Michael David Anderson, University of Alabama, Huntsville
Abolfazl Mohammadian, University of Illinois, Chicago

116. Theoretical And Numerical Derivation Of Stress Tensor From Thick Steel Plates Using Acoustoelasticity

Zeynab Abbasi, University of Illinois at Chicago
Didem Ozevin, University of Illinois, Chicago
Jose Anaya, University of Illinois at Chicago

117. Transportation Networks, People, and Buildings: Characterization of Urban System Components

Farideddin Peiravian, University of Illinois, Chicago
Matthieu de Lapparent, French Institute of Science and Technology for Transport, Development and Networks
Sybil Derrible, University of Illinois, Chicago

118. Urban Freight Survey Sampling: Challenges and Strategies

Takanori Sakai, University of Illinois at Chicago
Kazuya Kawamura, University of Illinois, Chicago
Tetsuro HYODO, Tokyo University of Marine Science and Technology

119. Evaluation of VMT Estimation Methods Using GPS Travel Survey Data

Alejandro Martin Blei, University of Illinois, Chicago
Kazuya Kawamura, University of Illinois, Chicago
Mahmoud Javanmardi, University of Illinois, Chicago
Abolfazl Mohammadian, University of Illinois, Chicago

120. Parking Reservation for Managing Downtown Curbside Parking (15-5008)

Zhibin Chen, University of Florida
Yafeng Yin, University of Florida
Fang He, University of Florida
Jane Jie Lin, University of Illinois, Chicago

121. Geography of Close Contacts and Face-to-Face Meetings

Nebiyou Yonas Tilahun, University of Illinois, Chicago
Moyin Li, University of Illinois, Chicago

122. Behavioral Analysis of Containerized Freight Shipments into the US: An Extension of FAME (Freight Activity Micro-simulation Estimator) Model

Sanghyeon Ko, University of Illinois, Chicago

123. Carsharing-Transit Card: Is It Good for Public Transportation?

Gregory L. Newmark, Center for Neighborhood Technology
Melissa C. Schramm, University of Illinois, Chicago

124. New Technologies Subcommittee, ABJ40(4)

Elaine Murakami, Federal Highway Administration, presiding
Abolfazl Mohammadian, University of Illinois, Chicago, presiding

125. Discussion P15-7156

Jane Jie Lin, University of Illinois, Chicago
Josias Zietsman, Texas A&M Transportation Institute
Douglas S. Eisinger, Sonoma Technology, Inc.
Michael Claggett, Federal Highway Administration
Jacki Ploch, Texas Department of Transportation
Tim Sexton, Minnesota Department of Transportation

126. Capacity Allocation in Vertically Integrated Railway Systems: A Rubinstein Sequential Bargaining Game Approach

Ahmadreza Talebian, University of Illinois at Chicago
Bo Zou, University of Illinois, Chicago

127. Demographic Characterization of Anonymous Trace Travel Data

Joshua Auld, Argonne National Laboratory
Abolfazl Mohammadian, University of Illinois, Chicago
Marcelo Simas, Westat Inc.
Jean L. Wolf, Westat Inc.
William Bachman, Westat Inc.

128. A Mixed Joint Discrete-Continuous Model of Non-Mandatory Out-of-Home Activity Type and Activity Duration

Behzad Karimi, University of Illinois, Chicago
Zahra Pourabdollahi, RS&H, Inc.
Ramin Shabanpour Anbarani, University of Illinois, Chicago
Abolfazl Mohammadian, University of Illinois, Chicago

129. Green Vehicle Routing Problem Considering Joint Effect of Vehicle Load and Speed

Wei Zhou, University of Illinois, Chicago
Qin Chen, Here (Nokia)
Jane Jie Lin, University of Illinois, Chicago

130. The Observe-Driver-and-Learn Platform for Relevance Estimation in VANET Safety Warning Applications

Jane Jie Lin, University of Illinois, Chicago
Piotr Szczurek, Lewis University
Ouri Wolfson, University of Illinois, Chicago

Bo Xu, Nokia

131. Reducing Commuting-Related Environmental Impacts in the Healthcare Sector: An Exploratory Study

Ning Ai, University of Illinois, Chicago

Susan Kaplan, University of Illinois, Chicago

Peter Orris, University of Illinois Hospital and Health Sciences System

P. S. Sriraj, University of Illinois, Chicago

132. Transportation and Air Quality Committee

Jane Jie Lin, University of Illinois, Chicago, presiding

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

Kazuya Kawamura, University of Illinois, Chicago, presiding

134. Proven Safety Advantages of Automated Guideway Transit Systems

Rongfang Liu, New Jersey Institute of Technology

Nadereh Moini, University of Illinois, Chicago

135. Evaluating the State of Mobility Management and Human Service Transportation Coordination

Jeremy Mattson, North Dakota State University

James Miller, Upper Great Plains Transportation Institute

Jay A. Goodwill, University of South Florida

P. S. Sriraj, University of Illinois, Chicago

Jill Hough, North Dakota State University

University of Kentucky

136. Quantification of Benefits from Constructability Reviews

Nikiforos Stamatiadis, University of Kentucky

Roy Sturgill, Kentucky Transportation Center

Paul M. Goodrum, University of Colorado, Boulder

137. The Use of Matrix Based Tactile Surface Sensors to Assess the Fine Scale Ballast-Tie Interface Pressure Distribution in Railroad Track

Michael McHenry, Transportation Technology Center, Inc.

Michael O. Brown, Transportation Technology Center, Inc.

Joseph LoPresti, Transportation Technology Center, Inc.

Jerry G. Rose, University of Kentucky

Reginald R. Souleyrette, University of Kentucky

138. Advances in Performance Metrics for Context-Sensitive Solution Projects

Nikiforos Stamatiadis, University of Kentucky, presiding

139. Determining Reference Speed for Urban Arterials Using GPS-Based Speed Data

Xu Zhang, University of Kentucky
Mei Chen, University of Kentucky

140. Applications of Context-Sensitive Solutions

Nikiforos Stamatiadis, University of Kentucky, presiding

141. CSS Applications for Road Diet Projects

Adam Kirk, University of Kentucky

142. Fiber-Reinforced Polymer Composites in Infrastructure, Part 1 (Part 2, Session 743)

Issam E. Harik, University of Kentucky, presiding

Abdeljelil Belarbi, University of Houston, presiding

143. Safety Data and Information Technology Challenges

Reginald R. Souleyrette, University of Kentucky, presiding

David L. Harkey, University of North Carolina, Chapel Hill, presiding

144. Improving the Effectiveness of Contractor Evaluation at the Kentucky Transportation Cabinet

Ying Li, University of Kentucky

Roy Sturgill, Kentucky Transportation Center

Timothy Taylor, University of Kentucky

Maegan Mansfield, ICA Engineering, Inc.

145. Controlling Crest Vertical Curvature Rates Based On Variable Grade Stopping Sight Distance Calculation

Stergios Mavromatis, Technological Educational Institute of Athens, Greece

Nikiforos Stamatiadis, University of Kentucky

Basil M. Psarianos, National Technical University of Athens, Greece

George Yannis, National Technical University of Athens, Greece

146. High-Performance Public Involvement: Frameworks, Performance Measures, and Data

Keiron Bailey, University of Arizona

Theodore H. Grossardt, Kentucky Transportation Cabinet

John Ripy, University of Kentucky

147. Structural Fiber Reinforced Polymers Committee

Issam E. Harik, University of Kentucky, presiding

148. Context Sensitive Design/Solutions (CSD/CSS) Task Force

Nikiforos Stamatiadis, University of Kentucky, presiding

149. Fiber-Reinforced Polymer Composites in Infrastructure, Part 2 (Part 1, Session 458)

Wael A. Zatar, Marshall University, presiding

Abheetha Peiris, University of Kentucky, presiding

150. FRP Retrofit of Impacted Concrete Bridge Girders

Issam Harik, University of Kentucky
Abheetha Peiris, University of Kentucky

151. Sensitivity Analysis of New Simulation-Based Conflict Metrics

Chen Wang, Tongji University, China
Nikiforos Stamatiadis, University of Kentucky

152. Quantifying Rail-Highway Grade Crossing Roughness: Accelerations and Dynamic Modeling

Teng Wang, University of Kentucky
Reginald R. Souleyrette, University of Kentucky
Daniel Lau, University of Kentucky
Ahmed Aboubakr, University of Illinois, Chicago
Edward Randerson, University of Illinois, Chicago

153. New River Jobs Research and the Potential to Contribute Payroll Tax Revenue to the Government

Mark Burton, University of Tennessee
Ted Grossardt, University of Kentucky

154. Cancelled. The Role of Freight Transportation in Economic Competitiveness: The 8th UTC Spotlight Conference

Reginald R. Souleyrette, University of Kentucky, presiding

155. UTC Spotlight Conference: Freight Supply Chains

Melissa S. Tooley, Texas A&M Transportation Institute
Reginald R. Souleyrette, University of Kentucky

156. Intermodal Network Model of Coal Distribution in the United States

Benjamin L. Blandford, University of Kentucky
Theodore H. Grossardt, Kentucky Transportation Cabinet
Michael Shouse, Kentucky Transportation Center
John Ripy, University of Kentucky

University of Tennessee, Knoxville

157. Short-Term Speed Profiling and Prediction based on Spatio-Temporal Dynamics

Jianjiang Yang, University of Tennessee, Knoxville

158. Impacts of New Data and Information Technologies on Transforming Traveler Experience

Jeffrey Adler, Open Roads Consulting, Inc., presiding
Asad J. Khattak, University of Tennessee, Knoxville, presiding
Robert Rupert, Federal Highway Administration, presiding

159. Design and Laboratory Evaluation of Open-Graded Asphalt Mixtures

Baoshan Huang, University of Tennessee, Knoxville, presiding

160. Transportation Planning for Small and Medium-Sized Communities Committee

Jerry D. Everett, University of Tennessee, Knoxville, presiding

161. Simulation of Coastline's Echo on Marine Radar Simulator Based on Fractal Theory

Shuguang Ji, University of Tennessee, Knoxville

Zhang Zhang, Tangshan Maritime Safety Administration, China

Hongbiao Yang, University of Tennessee, Knoxville

Dan Liu, National Police University of China

Rapinder Sawhney, University of Tennessee, Knoxville

162. Sequencing and Scheduling in Railway Classification Yards

Haodong Li, Beijing Jiaotong University, China

Mingzhou Jin, University of Tennessee, Knoxville

Shiwei He, Beijing Jiaotong University, China

163. Non-crossing Rail-Trespassing Crashes in the Past Decade: A Spatial Approach to Analysis of Injury Severity

Xin Wang, University of Tennessee, Knoxville

Asad J. Khattak, University of Tennessee, Knoxville

Jun Liu, University of Tennessee, Knoxville

David B. Clarke, University of Tennessee, Knoxville

164. Rail Research In Practice

David B. Clarke, University of Tennessee, Knoxville, presiding

165. Physicochemical Behavior of Soils and Industrial Byproducts

Zhen Liu, Michigan Technological University, presiding

Angelica M. Palomino, University of Tennessee, Knoxville, presiding

166. Exploring Nonlinear Effects of Traffic Crash Determinants Using a Novel Poisson-Mixed Multivariate Adaptive Regression Splines Model

Yanru Zhang, University of Maryland, College Park

Ximiao Jiang, Federal Highway Administration

Ali Haghani, University of Maryland, College Park

Baoshan Huang, University of Tennessee, Knoxville

167. Global System for Transportation Simulation and Visualization in Emergency Evacuation Scenarios

Wei Lu, Oak Ridge National Laboratory

Cheng Liu, Oak Ridge National Laboratory

Neil Thomas, Oak Ridge National Laboratory

Budhendra L. Bhaduri, Oak Ridge National Laboratory

Lee D. Han, University of Tennessee, Knoxville

168. Rural-to-Urban Intercity Deviated Fixed-Route Design: Application in Tennessee

Hongtai Yang, Southwest Jiaotong University, China
Christopher R. Cherry, University of Tennessee, Knoxville
Russell L. Zaretski, University of Tennessee, Knoxville
Megan Smirti Ryerson, University of Pennsylvania

169. Fair Representation of Transportation Research Record's Impacts: A Case Study on Journal Citation Reports' Impact Factor

Lee D. Han, University of Tennessee, Knoxville
Shashi S. Nambisan, University of Tennessee, Knoxville
Ebony Latrice Lemons, University of Tennessee, Knoxville
Christopher R. Cherry, University of Tennessee, Knoxville
Ryan Overton, Trine University

170. Ranking Cities for Safety Investigation by Potential for Safety Improvement

Wen Cheng, California State Polytechnic University, Pomona
Ximiao Jiang, University of Tennessee, Knoxville
Weihua Lin, University of Arizona
Xudong Jia, California State Polytechnic University, Pomona
Xinkai Wu, California State Polytechnic University, Pomona
Jiao Zhou, Wipro (Shanghai) Limited, China

171. Alternative Approach to Parking Demand Forecast Modeling: Case Study of Downtown Knoxville, Tennessee

Hyeonsup Lim, University of Tennessee, Knoxville
Grant T. Williams, University of Tennessee, Knoxville
Dua Abdelqader, University of Tennessee, Knoxville
Joseph Amagliani, University of Tennessee, Knoxville
Ziwen Ling, University of Tennessee, Knoxville
Davis William Priester, University of Tennessee, Knoxville
Christopher R. Cherry, University of Tennessee, Knoxville

172. How much information is lost when sampling driving behavior data?

Jun Liu, University of Tennessee, Knoxville
Asad J. Khattak, University of Tennessee, Knoxville
Lee D. Han, University of Tennessee, Knoxville

173. The Value of Confirmation Lights and their Unintended Impact on Driver Compliance and/or Deterrence to Run a Red Light

Kwaku F. Boakye, The University of Tennessee, Knoxville
Eric J. Fitzsimmons, Kansas State University
Steven D. Schrock, University of Kansas
Tomas E. Lindheimer, Texas A&M Transportation Institute

174. Analyzing Failure Probability of LTPP Pavement Preventive Maintenance Treatments through Survival Analysis

Qiao Dong, University of Tennessee, Knoxville
Baoshan Huang, University of Tennessee, Knoxville

175. Using Social Network Analysis to Identify and Mitigate Transportation Congestion and Delays

Eric Vechan, Mississippi State University
Islam El-Adaway, University of Tennessee, Knoxville
Marwa M. Hassan, Louisiana State University

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

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

177. Emerging Vehicles for Low Speed Transportation Joint Subcommittee of ANF20, ANF10, ANB40, ANF30, AP020

Christopher R. Cherry, University of Tennessee, Knoxville, presiding
Geoffrey Rose, Monash University, Australia, presiding

178. Effects of Distance to Medical Facilities and Rescue Time on Traffic Mortality Utilizing Geographic Information System

Wei Hu, University of Tennessee Knoxville
Qiao Dong, University of Tennessee, Knoxville
Baoshan Huang, University of Tennessee, Knoxville

179. Creating Indices for How People Drive in a Region: A Comparative Study of Driving Performance

Jun Liu, University of Tennessee, Knoxville
Asad J. Khattak, University of Tennessee, Knoxville
Xin Wang, University of Tennessee, Knoxville

180. Supporting Instantaneous Driving Decisions through Trajectory Data

Asad J. Khattak, University of Tennessee, Knoxville
Jun Liu, University of Tennessee, Knoxville
Xin Wang, University of Tennessee, Knoxville

181. The US/CUTC experience in cooperation across transport research organisations

Shashi S. Nambisan, University of Tennessee, Knoxville

182. Empirical Investigation of Airline Taxi Fuel Consumption Rates

Megan Smirti Ryerson, University of Pennsylvania
Mark Hansen, University of California, Berkeley
Dua Abdelqader, University of Tennessee, Knoxville

183. Outlook for U.S. Oil Dependence 2014: Is Independence in Sight?

David Lloyd Greene, University of Tennessee, Knoxville
Changzheng Liu, Oak Ridge National Laboratory

184. Cellulosic Biofuel Supply Chains and its Greenhouse Gas Emissions Impact: A Case Study in West Tennessee

Tun-Hsiang Edward Yu, University of Tennessee, Knoxville
Burton C. English, University of Tennessee, Knoxville
Lixia He, University of Tennessee, Knoxville
James A. Larson, University of Tennessee, Knoxville
James A Calcagno, University of Tennessee, Knoxville
Joshua S. Fu, University of Tennessee, Knoxville
Bradly Wilson, University of Tennessee, Knoxville

185. What Are the Differences in Driver Injury Outcomes at Highway-Rail Grade Crossings? Role of Passive and Active Controls (15-0959)

Jun Liu, University of Tennessee, Knoxville; et al.

186. Determination of Discrete Retardation Spectra of Asphalt Binders Using a Modified Windowing Method

Yiren Sun, Dalian University of Technology, China
Jingyun Chen, Dalian University of Technology, China
Baoshan Huang, University of Tennessee, Knoxville

187. Quantitative Characterization of Binder Blending: How Much RAP-RAS Binder Is Mobilized During Mixing?

Sheng Zhao, University of Tennessee, Knoxville
Baoshan Huang, University of Tennessee, Knoxville
Xiang Shu, University of Tennessee, Knoxville
Mark Woods, Tennessee Department of Transportation

188. Generating Fuel Economy Information to Support Cost-effective Vehicle Choices: Comparing Standard and Customized Driving Cycles

Xin Wang, University of Tennessee, Knoxville
Jun Liu, University of Tennessee, Knoxville
Asad J. Khattak, University of Tennessee, Knoxville

189. Aging of Asphalt Binders

Sheng Zhao, University of Tennessee, Knoxville, presiding

190. Field investigation into performance of asphalt mixture overlay on steel bridge deck

Xiaoyang Jia, University of Tennessee - Knoxville
Baoshan Huang, University of Tennessee, Knoxville
Shangjiang Chen, Guizhou Transportation Planning, Surveying and Design Institute, Co. Ltd
Dawei Shi, Guizhou Expressway Group Co. Ltd
Sampson Udeh, Tennessee Department of Transportation

191. Pedestrian Level of Service at Signalized Intersections in China Using an Intercept Survey Method

Ziwen Ling, University of Tennessee, Knoxville
Christopher R. Cherry, University of Tennessee, Knoxville
Ying Ni, Tongji University, China
Keping Li, Tongji University, China

192. Comparing Safety-Related Riding Behaviors on Bicycles and Electric Bicycles

Brian Casey Langford, University of Tennessee, Knoxville
Jiaoli Chen, University of Tennessee, Knoxville
Christopher R. Cherry, University of Tennessee, Knoxville

193. Rail Capacity Joint Subcommittee of AR040, AR030, AP070, AT010, AR010

David B. Clarke, University of Tennessee, Knoxville, presiding

194. What Are the Differences in Driver Injury Outcomes at Highway-Rail Grade Crossings? Role of Passive and Active Controls

Jun Liu, University of Tennessee, Knoxville
Asad J. Khattak, University of Tennessee, Knoxville
Stephen Richards, University of Tennessee, Knoxville
Shashi S. Nambisan, University of Tennessee, Knoxville

195. Metrics & Lessons from Building the Planet's Longest Biofuels Corridor – All 1,786 Miles of I-75

Jonathan G. Overly, University of Tennessee, Knoxville

196. National Transportation Data Requirements and Programs Committee

Shashi S. Nambisan, University of Tennessee, Knoxville, presiding
Steven E. Polzin, University of South Florida, presiding

197. HM Access: Using Technology to Provide Enhanced Information, Efficiency and Safety to the Current HM Shipping Paper Requirement, Thereby Facilitating the Ability to Effectively Respond to Incidents and Roadside Safety Inspections

Bob Richard, Labelmaster
Shashi S. Nambisan, University of Tennessee, Knoxville

198. Vehicle Consumer Preference Heterogeneity: Random Coefficient Logit Approach with 2000–2013 Sales Data

Sangsoo Park, University of Tennessee, Knoxville
Changzheng Liu, Oak Ridge National Laboratory
Zhenhong Lin, Oak Ridge National Laboratory

199. Introduction/Keynote Address

David Lloyd Greene, University of Tennessee, Knoxville