

Approximately 50 ITS-Davis representatives are participating in the 97th annual meeting of the Transportation Research Board to be held January 7-11, 2018 in Washington, D.C. Their presentations are listed below with session number, title, date, time, paper title, and authors.

## COMMITTEE MEETINGS

### **Low-Volume Roads Conference Planning Subcommittee, AFB30(1)**

Tuesday, January 9, 2018 10:15 AM-12:00 PM

**ITS-Davis Presider:** *David Jones*

### **Freight Surveys Subcommittee, ABJ40(2)**

Tuesday, January 9, 2018 12:15-1:15 PM

**ITS-Davis Presider:** *Miguel Jaller*

### **Low-Volume Roads Committee**

Tuesday, January 9, 2018 1:30-5:30 PM

*Design, Geotechnology, Pavements*

**ITS-Davis Presenter:** *David Jones*

### **Animal-Vehicle Collisions, ANB20 (2), Joint Subcommittee of ANB20, ADC30**

Tuesday, January 9, 2018 6:00-7:00 PM

**ITS-Davis Presider:** *Fraser Shilling*

### **International Aspects of Transportation Energy Subcommittee, ADC70(1)**

Wednesday, January 10, 2018 10:15 AM-12:00 PM

**ITS-Davis Presider:** *Lewis Fulton*

### **Technology and Behavior: Emerging Fleet and Travel Impacts on Air Quality Subcommittee, ADC20(2)**

Wednesday, January 10, 2018 10:15 AM-12:00 PM

**ITS-Davis Presider:** *Giovanni Circella*

## PRESENTATIONS AND PAPERS

### **SUNDAY, JANUARY 7, 2018**

#### **Workshop 114: Three Revolutions for Public Transit: From Service Agency to Mobility Platform**

9:00 AM-12:00 PM

**ITS-Davis Presider:** *Hanjiro Ambrose*

#### **Workshop 148: Disruptive Technologies: Impacts on Transportation Revenues**

1:30-4:30 PM

*Policy Responses to Vehicle Sharing, Electrification, and Automation*

**ITS-Davis Presenter:** *Giovanni Circella*

**MONDAY, JANUARY 8, 2018**

**Lectern Session 203: Mobility of the Future**

8:00-9:45 AM

*Projecting Travelers into a World of Self-driving Cars: Travel Behavior Implications of a Naturalistic Experiment*

**ITS-Davis Presenter:** *Giovanni Circella*

**Lectern Session 238: Clearing the Air Around Ports**

8:00-9:45 AM

*Evaluation of the Health Impacts of Rolling Back a Port Clean Trucks Program*

**ITS-Davis Presenter:** *Debbie Niemeier*

**Poster Session 240: Understanding Longer-Distance Journeys**

8:00-9:45 AM

*Estimating the Longest Trip for Plug-In Electric Vehicle Households*

**ITS-Davis Presenters:** *Rosaria Berliner, Gil Tal, Alan Jenn*

**Poster Session 305: From Parking Operations to the Sharing Economy: All Things Parking**

10:15 AM-12:00 PM

*A Simulation Study of the Efficiency of Unmarked On-Street Parking and Vehicle Downsizing*

**ITS-Davis Presenter:** *Tongxin Xu*

**Poster Session 308: Innovations in Urban Data and Mobility Modeling**

10:15 AM-12:00 PM

*Using Matrix Decomposition Method to Understand the Structure of Metro Travel Demand*

**ITS-Davis Presenter:** *H. Zhang*

*Time Series Relations Between Parking Garage Occupancy and Traffic Speed in Macroscopic Downtown Areas—A Data Driven Study*

**ITS-Davis Presenters:** *Rui Ma, Shenyang Chen, H. Zhang*

*Identifying Temporal and Spatial Characteristics of Residents' Trips from Cellular Signaling Data: A Case Study of Beijing*

**ITS-Davis Presenter:** *Yizheng Wu*

**Poster Session 321: New Materials and Test Methods for Stabilization of Soils**

10:15 AM-12:00 PM

*Development of an Improved Test Setup for Measuring the Resilient Modulus of Stabilized Materials*

**ITS-Davis Presenters:** *Stephanus Louw, Rongzong Wu, David Jones*

**Lectern Session 266: Let Us Take You for a Ride: Understanding Mobility on Demand**

10:15 AM-12:00 PM

*On-demand Ride Services in California: Investigating the Factors Affecting the Frequency of Use of Uber/Lyft*

**ITS-Davis Presenters:** Farzad Alemi, Susan Handy, Giovanni Circella

**Lectern Session 268: Competing Visions of Transportation's Future**

10:15 AM-12:00 PM

*Shared-Mobility Perspective*

**ITS-Davis Presenter:** Lewis Fulton

**Lectern Session 270: Family Life and Sustainable Transportation Choices**

10:15 AM-12:00 PM

*Limitations to the Adoption of Uber and Lyft in California and Impacts on the Use of Other Travel Modes*

**ITS-Davis Presenters:** Daniel Sperling, Farzad Alemi, Giovanni Circella

**Lectern Session 275: Pavement Structural Modeling and Evaluation**

10:15 AM-12:00 PM

*Energy Dissipation in Concrete Pavements Under Moving Loads Due to Structural Damping*

**ITS-Davis Presenter:** John Harvey

*Development of Artificial Neural Networks for Predicting the Response of Bonded Concrete Overlays of Asphalt for Use in a Faulting Prediction Model*

**ITS-Davis Presenter:** John Harvey

**Lectern Session 341: Toward Zero Emissions by 2050: The Role of Transportation Technology**

1:30-3:15 PM

*Policies to Ensure a Zero-Emission Future in a Connected and Automated Light-Duty Sector*

**ITS-Davis Presenter:** Lewis Fulton

**Lectern Session 408: Improving Road Travel Fuel Efficiency and Emissions, Part 1: Effective Technologies and Their Implications (Part 2, Session 742)**

3:45-5:30 PM

*The Future of Electric Vehicle Emissions in the United States*

**ITS-Davis Presenter:** Alan Jenn

*Modeling the Potential of BEVs and PHEVs in GHG Reduction Based on Household level GPS Data*

**ITS-Davis Presenters:** Wei Ji, Gil Tal

**Lectern Session 412: Converting Distressed Paved Roads to Engineered Unpaved Roads**

3:45-5:30 PM

*Converting Paved Roads to Unpaved: California Experience*

ITS-Davis Presenter: *David Jones*

**Poster Session 447: Fiber-Reinforced and Asphalt Rubber Mixtures: Properties and Performance**

3:45-5:30 PM

*Laboratory Testing to Identify any Implications of Using Reclaimed Asphalt Rubber Pavement in Conventional Asphalt Concrete Mixes*

ITS-Davis Presenters: *David Jones, Shawn Hung, Mohamad Zia Alavi*

**TUESDAY, JANUARY 9, 2018**

**Lectern Session 499: Intermodal Passenger Facilities and Access to Jobs**

8:00-9:45 AM

*Private Shuttles and Public Transportation: Effects of Shared Transit Stops on Travel Time and Reliability in Seattle*

ITS-Davis Presenter: *Regina Clewlow*

**Poster Session 508: Climate Change and Decarbonization**

8:00-9:45 AM

*LOS vs. VMT in California's Environmental Review: A Los Angeles Case Study*

ITS-Davis Presenters: *Jamey Volker, Amy Lee, Dillon Fitch, Joe Kaylor*

**Poster Session 514: Current Issues in Ecology and Transportation**

8:00-9:45 AM

*Automating Wildlife-Vehicle Conflict Tracking and Analysis*

ITS-Davis Presenter: *Fraser Shilling*

*Traffic Noise and Light as Potential Explanations for Suppressed use of Wildlife Crossing Structures*

ITS-Davis Presenter: *Fraser Shilling*

**Poster Session 517: Emerging Research in Transportation and Land Development**

8:00-9:45 AM

*Urban Travel and Residential Choices Across Generations: Results from a North American Survey*

ITS-Davis Presenters: *Gouri Shankar Mishra, Alan Jenn*

**Lectern Session 536: Life Stage and Demographics**

8:00-9:45 AM

*Are Millennials More Multimodal? A latent class analysis with attitudes and preferences*

ITS-Davis Presenter: *Giovanni Circella*

**Poster Session 566: Current Issues in Transportation Energy**

10:15 AM-12:00 PM

*Cost Implications for Automakers' Compliance with Emission Standards from Zero Emissions Vehicle Mandate*

**ITS-Davis Presenter:** *Scott Hardman, Alan Jenn*

**Poster Session 567: Current Issues in Alternative Transportation Fuels and Technologies**

10:15 AM-12:00 PM

*Exploring Mechanisms of Decision Making For Plug-In Electric Vehicle Adoption or Rejection: A Qualitative Study in a Second- and a Third-Tier City in China*

**ITS-Davis Presenters:** *Yan Xing, Gil Tal, Yunshi Wang*

*Battery Electric Vehicle Recharging: A Qualitative Investigation into High-End Early Adopter Attitudes*

**ITS-Davis Presenter:** *Scott Hardman*

*Motivations and Barriers Associated With the Adoption of Battery Electric Vehicles in Beijing: A Multinomial Logit Model Approach*

**ITS-Davis Presenters:** *Yan Xing, Gil Tal, Yunshi Wang*

**Lectern Session 541: Proven Performance of Concrete Overlays: Part 2 (Part 1, Session 479)**

10:15 AM-12:00 PM

*Evaluation of Mix Designs for Rapid Construction of Bonded Concrete Overlays*

**ITS-Davis Presenters:** *Fabian Paniagua Fernandez, Julio Paniagua, John Harvey*

**Lectern Session 557: Trends in Transit Information**

10:15 AM-12:00 PM

*Real-Time Riders? Millennials, Smartphone Use and Public Transportation Ridership*

**ITS-Davis Presenter:** *Kate Tiedeman, Giovanni Circella*

**Poster Session 638: Sustainable and Resilient Pavements**

1:30-3:15 PM

*Initial Evaluation Approach for the Life Cycle Impact of Permeability of Pervious Pavements*

**ITS-Davis Presenter:** *John Harvey*

**Poster Session 640: Asphalt Binder Additives and Modifiers**

1:30-3:15 PM

*Development of Performance Grading Testing Procedures for Asphalt Rubber Binders Containing Large Rubber Particles*

**ITS-Davis Presenters:** *Yanlong Liang, David Jones, Mohamad Zia Alavi, John Harvey*

**Poster Session 643: Asphalt Mixture Performance Using Modified Binders and Rejuvenators**

1:30-3:15 PM

*Performance-Related Properties of Asphalt Mixture Modified with a Polymerized Pellet Mix Additive*

**ITS-Davis Presenter:** *Mohamad Zia Alavi*

**Lectern Session 596: Location Choice and Integrated Models**

1:30-3:15 PM

**ITS-Davis Presiding:** *Giovanni Circella*

**Lectern Session 598: Technological Advances in Road Ecology Science**

1:30-3:15 PM

*Collecting & Using Big Data for Wildlife-Vehicle Conflict Reduction*

**ITS-Davis Presenter:** *Fraser Shilling*

**Poster Session 633: Statewide Data and Information Systems, Part 2 (Part 1, Session 632)**

1:30-3:15 PM

*Statewide Comparison of Origin-Destination Matrices between California Travel Model and Twitter*

**ITS-Davis Presenter:** *Jae Hyun Lee*

**Poster Session 636: The Future Is Here: Major Advances in Pavement Management Systems**

1:30-3:15 PM

*Development of a Cracking Performance Prediction Model for Replaced Concrete Slabs in California*

**ITS-Davis Presenters:** *Ashkan Saboori, Jeremy Lea, Venkata Kannekanti, Arash Saboori, John Harvey*

**Lectern Session 640: Freight Rail Propulsion: Where Does the Energy Come From?**

1:30-3:15 PM

**ITS-Davis Moderator:** *Raphael Isaac*

**Poster Session 650: Transit Service Disruptions: Impacts and Mitigation Measures**

1:30-3:15 PM

*Optimizing Tailored Bus Bridging Paths*

**ITS-Davis Presenter:** *H. Zhang*

**Poster Session 713: Health, Transportation, and Moving Forward**

3:45-5:30 PM

*Modeling Health Equity in Active Transportation Planning*

**ITS-Davis Presenter:** *Yizheng Wu*

**Poster Session 714: Innovative and Specification Testing of Asphalt Binders**

3:45-5:30 PM

*Infrared Spectroscopy on Asphalt Binders: Improving Repeatability and Sensitivity*

ITS-Davis Presenters: *Mohamad Zia Alavi, David Jones, John Harvey*

**Lectern Session 669: Advancing the Science of Transportation Demand Modeling**

3:45-5:30 PM

*Advancing TDM: Strengthening Linkages with Policy and Planning*

ITS-Davis Presenter: *Giovanni Circella*

*Advancing TDM: Advancing Knowledge in a Generalizable and Testable Manner*

ITS-Davis Presenter: *Giovanni Circella*

**Poster Session 718: Fatigue Cracking of Bituminous Mixtures**

3:45-5:30 PM

*Sine Versus Haversine Displacement Waveform Comparison for Hot Mix Asphalt*

*Four-Point Bending Fatigue Testing*

ITS-Davis Presenters: *Rongzong Wu, John Harvey*

**Lectern 671: Pollinators: State DOT Support Programs and Current Issues**

3:45-5:30 PM

*Review of Potential Negative Impacts to Pollinators from Roadside Vegetation*

*Improvements*

ITS-Davis Presenter: *Fraser Shilling*

**Lectern 676: Impact of Pavements on Rolling Resistance**

3:45-5:30 PM

*Preliminary Results of the California Study—Relative Contribution of the Various Components of Rolling Resistance*

ITS-Davis Presenter: *John Harvey*

**Poster Session 709: Latest Research in Metropolitan Policy, Planning, and Processes**

3:45-5:30 PM

*Local Governments and the Land Use-Transportation Connection: Statewide Survey Results from California*

ITS-Davis Presenters: *Gian-Claudia Sciara, Sarah Strand*

*Simulation of Ridesourcing Using Agent-Based Demand and Supply Models Regional: Potential Market Demand for First Mile Transit Travel and Reduction in Vehicle Mile's Travelled in the San Francisco Bay Area*

ITS-Davis Presenters: *Farzad Alemi, Caroline Rodier*

**WEDNESDAY, JANUARY 10, 2018**

**Poster Session 781: Cycling Safety and Comfort**

8:00-9:45 AM

*What Is It About Bicycling? Evidence from Davis, California*

ITS-Davis Presenters: *Susan Handy, Amy Lee*

**Poster Session 773: Travel Behavior of Special Population Groups**

8:00-9:45 AM

*Commute Quality: Exploring the role of mode and other factors using the UC Davis Campus Travel Survey*

ITS-Davis Presenter: *Susan Handy*

*Understanding the Mobility Patterns of Millennials and Older Adults in Bogota, Colombia*

ITS-Davis Presenter: *Giovanni Circella*

**Poster Session 774: Travel Behavior**

8:00-9:45 AM

*Investigating the Satisfaction with Travel Amounts: A Comparison of Commuters and Non-Commuters in California*

ITS-Davis Presenter: *Giovanni Circella*

*Exploring the Self-Reported Long-Distance Travel Frequency of Adult Californians*

ITS-Davis Presenters: *Giovanni Circella, Rosaria Berliner*

**Lectern Session 806: Operational Applications of Environmental Justice**

10:15 AM-12:00 PM

*Opportunities for Shared Use Mobility Services in Rural Disadvantaged Communities in California's San Joaquin Valley*

ITS-Davis Presenters: *Caroline Rodier, Laura Podolsky*

**Lectern Session 819: Drivers' Behavior as a Function of Their Characteristics and the Driving Environment**

10:15 AM-12:00 PM

*Effect of Traffic Density on Lane Change and Overtaking Maneuvers: A Driving Simulator-Based Study*

ITS-Davis Presenter: *H. Zhang*

**Poster Session 828: Information and Communications Technology and Travel Behavior: A Spectrum of Findings**

10:15 AM-12:00 PM

*Outcomes of Travel-based Multitasking: Reported Benefits and Disadvantages of Conducting Activities While Commuting*

ITS-Davis Presenter: *Giovanni Circella*

**Lectern Session 844: Built Environment and Demographic Issues**

2:30-4:00 PM

*Millennials in Cities*

ITS-Davis Presenter: *Giovanni Circella*



**Lectern Session 849: Cycling Experience, Comfort, and Stress**

2:30-4:00 PM

*The Effects of Building a Stock of Bicycling Experience in Youth*

**ITS-Davis Presenter:** *Susan Handy*

*The Relationship Between Real and Imagined Bicycling Comfort and Safety*

**ITS-Davis Presenters:** *Dillon Fitch, Susan Handy*

**Poster Session 857: Productivity and Management**

2:30-4:00 PM

*What Drives Your Drivers: An In-depth look at Lyft and Uber Drivers*

**ITS-Davis Presenters:** *Rosaria Berliner, Gil Tal*

**Poster Session 859: Sensing and Information Technology Innovation to Enhance Traffic Operation Efficiency**

2:30-4:00 PM

*Sensor Measurement Error Estimation on Transportation Network*

**ITS-Davis Presenters:** *Yudi Yang, Han Yang, Yueyue Fan*