WORKSHOPS

Workshop 160
Geodesign for Planning a Regional Network of Alternative Fuel Stations

Sunday 1:30 PM- 4:30 PM
Convention Center, 146A

Michael Kuby, Arizona State University, presiding

- Introduction of Geodesign Network Planning Tool (P18-20408)
  *Michael Kuby, Arizona State University*

- Adapting the COLLABLOCATION Open-Source Software to New Applications (P18-20410)
  *Fangwu Wei, Arizona State University*

SESSIONS

Poster Session 251
Innovations in Adaptive Signal Control

Monday 8:00 AM- 9:45 AM
Convention Center, Hall E

- Developing a Decentralized Signal Control Strategy Considering Link Storage Capacity (18-02386)
  *Hao Yu, Southeast University; Pan Liu, Southeast University; Xuesong Zhou, Arizona State University*

Poster Session 256
Truck Efficiency: Routing, Platooning, Energy Consumption, and Safety

Monday 8:00 AM- 9:45 AM
Convention Center, Hall E

- Geographic Distribution of Pass-Through Truck Traffic in the United States (18-05100)
  *David King, Arizona State University; Deborah Salon, Arizona State University; Arnold Maltz, Arizona State University*
**Poster Session 316**
Trends in Emerging Project Delivery Methods and Techniques

Monday 8:00 AM- 9:45 AM
Convention Center, Hall E

- Design–Build Stipends and Their Impact on Highway Project Innovation (18-02766)
  *Douglas Alleman, University of Colorado, Boulder; Matthew Stanford; Dean Papajohn, Arizona State University; Keith Molenaar, University of Colorado, Boulder*

**Lectern Session 262**
50th Anniversary of Federally Mandated Automobile Safety: What Are the Implications for Future Innovations in Automobile Design?

Monday 10:15 AM- 12:00 PM
Convention Center, 152B

- Reconfiguring Responsibility: Fifty Years of Rethinking Our Relationship with the Automobile (P18-20324)
  *Jameson Wetmore, Arizona State University*

**Lectern Session 267**
Vehicles and Autonomy and Modeling, Oh My!

Monday 10:15 AM- 12:00 PM
Convention Center, 156

- An Application of a Rank-Ordered Probit Modeling Approach to Understanding Level of Interest in Autonomous Vehicles (18-06699)
  *Gopindra Sivakumar Nair, University of Texas, Austin; Sebastian Astroza, University of Texas, Austin; Chandra Bhat, University of Texas, Austin; Sara Khoeini, Arizona State University; Ram Pendyala, Arizona State University*

**Lectern Session 280**
Unsaturated Expansive Soil Properties and Improvement

Monday 10:15 AM- 12:00 PM
Convention Center, 209A

*Claudia Zapata, Arizona State University, presiding*
**Lectern Session 339**  
Methodological Advances in Travel Behavior Analysis  
Monday 1:30 PM- 3:15 PM  
Convention Center, 156  

Accounting for Multidimensional Dependencies Among Decision Makers Within a Generalized Model Framework: An Application to Understanding Shared Mobility Service Usage Levels (18-05777)  
Pragun Vinayak, University of Texas, Austin; Felipe Dias, University of Texas, Austin; Sebastian Astroza, University of Texas, Austin; Chandra Bhat, University of Texas, Austin; Ram Pendyala, Arizona State University; Venu Garikapati, National Renewable Energy Laboratory

**Poster Session 379**  
Analyzing the Effectiveness of Congestion Pricing and Managed Lanes  
Monday 1:30 PM- 3:15 PM  
Convention Center, Hall E  

Control and Estimation of Traffic Systems with High-Occupancy Toll Lanes (18-05284)  
Wenlong Jin, University of California, Irvine; Xuting Wang, University of California, Irvine; Yingyan Lou, Arizona State University

**Poster Session 390**  
Moisture and Temperature Effects on Pavement Layers  
Monday 1:30 PM- 3:15 PM  
Convention Center, Hall E  

Modeling the In Situ Seasonal Variation Potential of Resilient Modulus in Subgrade Soils (18-00419)  
Kevin Gaspard, Louisiana Department of Transportation and Development; Zhongjie Zhang, Louisiana Department of Transportation and Development; Gavin Gautreau, Louisiana Department of Transportation and Development; Khalil Hanifa, Louisiana Department of Transportation and Development; Claudia Zapata, Arizona State University; Murad Abu-Farsakh, Louisiana Department of Transportation and Development
**Poster Session 445**

Community Impact Assessment

Monday 3:45 PM- 5:30 PM
Convention Center, Hall E

Geographic, Racial, and Income Variation in Road User and Transportation Fees: Paying the Price for New Transportation—Evidence from Household Surveys (P18-20593)

*Jonathan Peters, City University of New York (CUNY); David King, Arizona State University; Cameron Gordon, University of Canberra*

**Poster Session 447**

Fiber-Reinforced and Asphalt Rubber Mixtures: Properties and Performance

Monday 3:45 PM- 5:30 PM
Convention Center, Hall E

Effect of Synthetic Fiber Distribution and State on Mechanical Performance of Fiber-Reinforced Asphalt Concrete

*Benjamin Underwood, North Carolina State University; Hossein Noorvand, Arizona State University; Ramadan Salim, Arizona State University; Jeff Stempihar, Arizona State University; Jose Medina, Arizona State University*

**Poster Session 508**

Climate Change and Decarbonization

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


*Qing Miao, Rochester Institute of Technology (RIT); Eric Welch, Arizona State University; Fengxiu Zhang, Arizona State University; P. Sriraj, University of Illinois, Chicago*
**Poster Session 517**
Emerging Research in Transportation and Land Development
Tuesday 8:00 AM - 9:45 AM
Convention Center, Hall E

From Peak Hour to Time of Day: A Case Study of a Novel Parking Occupancy Measure and an Evaluation of Infill Development and Carsharing as Solutions to Parking Oversupply (18-00151)
*Calvin Thigpen, Arizona State University*

**Lectern Session 533**
Learning from Econometrics and Machines to Advance Transportation Demand Modeling
Tuesday 10:15 AM - 12:00 PM
Convention Center, 145A

Representing Heterogeneity in Structural Relationships Among Multiple Choice Variables Using a Latent Segmentation Approach (18-04848)
*Sebastian Astroza, University of Texas, Austin; Venu Garikapati, National Renewable Energy Laboratory; Ram Pendyala, Arizona State University; Chandra Bhat, University of Texas, Austin; Patricia Mokhtarian, Georgia Institute of Technology*

**Poster Session 567**
Current Issues in Alternative Transportation Fuels and Technologies
Tuesday 10:15 AM - 12:00 PM
Convention Center, Hall E

Do Electric Vehicles Need Subsidies? A Comparison of Ownership Costs for Conventional, Hybrid, and Electric Vehicles (18-00851)
*Hanna Breetz, Arizona State University; Deborah Salon, Arizona State University*

Collaborative Geodesign for Alternative Fuel Station Locations in the U.S. Southwest Using COLLABLOCATION (18-02899)
*Keiron Bailey, University of Arizona; Qing Zhong, University of Arizona; Daoqin Tong, Arizona State University; Michael Kuby, Arizona State University; John Fowler, Arizona State University; Fangwu Wei, Arizona State University; William Shaeffer, Valley of the Sun Clean Cities Coalition*
Poster Session 571
Intelligent Transportation Systems
Tuesday 10:15 AM- 12:00 PM
Convention Center, Hall E

A Smartphone-Based Parking Guidance System with Predictive Parking Availability Information (18-03805)

Jun Xiao, Arizona State University; Yingyan Lou, Arizona State University

Lectern Session 665
Transportation Survey Design Considerations
Tuesday 3:45 PM- 5:30 PM
Convention Center, 154

Measurement Validity of Retrospective Survey Questions of Bicycling Behavior, Attitudes, and Skills (18-04195)

Calvin Thigpen, Arizona State University

Lectern Session 686
Traffic Signal Timing for Multimodal Operations
Tuesday 3:45 PM- 5:30 PM
Convention Center, Salon C

Multimodal Traffic Signal Control at Intersections: How Much Can We Push the Envelope to Serve All Special Vehicles? A Theoretical Analysis Based on Phase-Time Network Models (18-06291)

Pengfei Li, Mississippi State University; Xuesong Zhou, Arizona State University

Poster Session 728
Emerging Trends and Models in Demand-Responsive Transportation
Tuesday 3:45 PM- 5:30 PM
Convention Center, Hall E

Role of Informal Transit in New York City: A Case Study of Commuter Vans in Eastern Queens (18-05199)

Catherine Musili, Arizona State University; Deborah Salon, Arizona State University
Lectern Session 749
Pavement Texture, Friction, and Safety Issues

Wednesday 8:00 AM-9:45 AM
Convention Center, 203

Effects of the International Roughness Index and Rut Depth on Crash Rates (18-00421)
*Michael Mamlouk, Arizona State University; Mounica Vinayakamurthy, Arizona State University; Benjamin Underwood, North Carolina State University; Kamil Kaloush, Arizona State University*

Poster Session 770
Emerging Mobility

Wednesday 8:00 AM-9:45 AM
Convention Center, Hall E

Integrated, Personalized, Real-Time Traveler Information and Incentive Technology for Energy-Efficient Mobility Systems (18-01842)
*Chenfeng Xiong, University of Maryland, College Park; Mehrdad Shahabi, University of Florida; Yafeng Yin, University of Michigan, Ann Arbor; Xuesong Zhou, Arizona State University; Lei Zhang, University of Maryland, College Park*

Poster Session 773
Travel Behavior of Special Population Groups

Wednesday 8:00 AM-9:45 AM
Convention Center, Hall E

Commute Quality: Exploring the Role of Mode and Other Factors Using the UC Davis Campus Travel Survey (18-01351)
*Susan Handy, University of California, Davis; Calvin Thigpen, Arizona State University*

Do Bicycling Experiences and Exposure Influence Bicycling Skills and Attitudes? Evidence from a Bicycle-Friendly University (18-06504)
*Calvin Thigpen, Arizona State University*
**Poster Session 774**  
Travel Behavior

Wednesday 8:00 AM- 9:45 AM  
Convention Center, Hall E

A Multivariate Exploration of Emotional Feelings of Subjective Well-Being During Travel Episodes (18-06590)  
*Felipe Dias, University of Texas, Austin; Sebastian Astroza, University of Texas, Austin; Venu Garikapati, National Renewable Energy Laboratory; Ram Pendyala, Arizona State University; Chandra Bhat, University of Texas, Austin; Patricia Mokhtarian, Georgia Institute of Technology*

**Poster Session 784**  
Mobility on Demand

Wednesday 8:00 AM- 9:45 AM  
Convention Center, Hall E

How Many Vehicles Do We Need? Synchronizing Transfers in Pickup and Delivery Problem (18-06764)  
*Monirehalsadat Mahmoudi, Arizona State University; Junhua Chen, Beijing Jiaotong University; Tie Shi, Southwest Jiaotong University; Yongxiang Zhang; Xuesong Zhou, Arizona State University*

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

Wednesday 10:15 AM- 12:00 PM  
Convention Center, 140B

Poverty of the Carless (18-05051)  
*David King, Arizona State University; Michael Manville, University of California, Los Angeles; Michael Smart, Rutgers, The State University of New Jersey*
**Poster Session 829**
Travel Demand Models R Us

Wednesday 10:15 AM- 12:00 PM
Convention Center, Hall E

Understanding Activity Engagement Across Weekdays and Weekend Days: A Multivariate Multiple Discrete-Continuous Modeling Approach (18-05012)
Sebastian Astroza, University of Texas, Austin; Prerna Bhat, Harvard University; Chandra Bhat, University of Texas, Austin; Ram Pendyala, Arizona State University; Venu Garikapati, National Renewable Energy Laboratory

Quantifying the Contribution of Various Factors to Household Vehicle Miles of Travel (18-06558)
Abhilash Singh, University of Texas, Austin; Sebastian Astroza, University of Texas, Austin; Venu Garikapati, National Renewable Energy Laboratory; Ram Pendyala, Arizona State University; Chandra Bhat, University of Texas, Austin; Patricia Mokhtarian, Georgia Institute of Technology

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

Wednesday 2:30 PM- 4:00 PM
Convention Center, 103A

The Effects of Building a Stock of Bicycling Experience in Youth (18-00147)
Calvin Thigpen, Arizona State University; Susan Handy, University of California, Davis

**Poster Session 860**
Transportation Infrastructure Security and Resilience

Wednesday 2:30 PM- 4:00 PM
Convention Center, Hall E

Resilience of Transportation Systems Under Climate Change: Beyond Risk and Robustness (18-04703)
Samuel Markolf, Arizona State University; Christopher Hoehne, Arizona State University; Andrew Fraser, Arizona State University; Mikhail Chester, Arizona State University; Shane Underwood, North Carolina State University


**Poster Session 863**  
Behavioral Route Choice  
Wednesday 2:30 PM- 4:00 PM  
Convention Center, Hall E

Enabling Transportation System Intelligence: Hierarchical Estimation of Traffic Network State and Behavior Coefficients Using a Computational Graph Approach Modeling Framework (18-06749)  
Xin Wu, Beijing Jiaotong University; Jifu Guo, Beijing Transportation Research Center; Ruixi Lin, CloudMinds; Yunchao Qu, Beijing Jiaotong University; Kai Xian, Beijing Transportation Research Center; **Xuesong Zhou, Arizona State University**

**COMMITTEES**

**PARATRANSIT COMMITTEE (AP060)**  
Tuesday 8:00 AM- 12:00 PM  
Marriott Marquis, Mount Vernon Square (M3)

Development of a Transactional Data Standard for Demand-Responsive Transportation: A Case Study of Sweden  
Niels Larsen, Demand Trans; Roger Teal, Demand Trans; **David King, Arizona State University**; Candace Brakewood, University of Tennessee, Knoxville

**NETWORK MODELS IN PRACTICE SUBCOMMITTEE, ADB30(4)**  
Tuesday 3:45 PM- 5:30 PM  
Marriott Marquis, Monument (M4)

Xuesong Zhou, Arizona State University, Presiding

**PLANNING AND ENVIRONMENT GROUP EXECUTIVE BOARD (AD000)**  
– By Invitation Only  
Tuesday 6:00 PM- 8:30 PM  
Marriott Marquis, Farragut North (M3)

Ram Pendyala, Arizona State University, Presiding
ENGINEERING BEHAVIOR OF UNSATURATED GEOMATERIALS COMMITTEE (AFP60)

Wednesday 8:00 AM- 12:00 PM
Marriott Marquis, George Washington University (M1)

Claudia Zapata, Arizona State University, Presiding