

## **UC Davis at TRB 2007**

UC Davis researchers chaired several sessions, presented at and or presided over several committee meetings, and presented papers in 39 different presentation and posters sessions. In some cases, presenters gave the same paper in more than one session.

The listing below is based on available information and may not be all-inclusive.

### **Session Chairs**

#### **Poster Session 261**

##### **Women's Issues in Transportation**

Susan L. Handy, University of California, Davis, presiding

#### **Session 508**

##### **Accelerated Pavement Testing, Part 1 (Part 2, Session 631)**

David J. Jones, University of California, Davis, presiding

#### **Session 594**

##### **Assessment of Maintenance Treatments via Accelerated Pavement Testing**

John Harvey, University of California, Davis, presiding

#### **Session 647**

##### **What Does the Future Hold for Hybrid Vehicles?**

Dan Sperling, University of California, Davis, presiding

#### **Session 723**

##### **Characterization of Stabilized Materials for New Mechanistic-Empirical Pavement Design Guide**

David J. Jones, University of California, Davis, presiding

### **Committee Meetings**

#### **Metropolitan Policy, Planning, and Processes Committee**

Susan L. Handy, University of California, Davis, presenting

Christopher David Congleton, University of California, Davis, presenting

#### **Transportation and Sustainability Committee**

Daniel Sperling, University of California, Davis, presiding

Mark Delucchi presenting

### **Papers-Presentations-Poster Sessions**

#### **Recommendations for Residual Shear Strength of Liquefied Soils (P07-0613)**

Ross W. Boulanger, University of California, Davis

**Spatial Scenario Analysis Using Discrete Choice Models with GIS: Case Study of Transport Choices in New York City ([07-0591](#))**

Deborah Salon, University of California, Davis

**Linking Bus Transit to Land Development: Evidence from Austin, Texas ([07-0460](#))**

David Kuperman, California Department of Transportation

Susan L. Handy, University of California, Davis

**Lessons from the Hydrogen Pathways Study (P07-0427)**

Joan M. Ogden, University of California, Davis

**Bias from Unconditional Regression Analysis of Fatality Analysis Reporting System Data ([07-3309](#))**

Thomas M. Rice, University of California, Berkeley

Craig Anderson, University of California, Davis

**Analysis of Truck Traffic Growth for Mechanistic-Empirical Pavement Design Guide ([07-1592](#))**

Qing Lu, University of California - Davis

Yu Zhang, University of California, Berkeley

John Harvey, University of California, Davis

**Dynamic Network Simplex Method for Designing Emergency Evacuation Plans ([07-2419](#))**

Wei Shen, University of California, Davis

Yu (Marco) Nie, University of California, Davis

H.M. Zhang, University of California, Davis

**Comparison of Surface Characteristics and Pavement-Tire Noise of Various Thin Asphalt Overlays ([07-2981](#))**

Aybike Ongel, University of California, Davis

Erwin Kohler, University of California, Davis

Qing Lu, University of California – Davis

**Application of Constrained Extended Kalman Filter in Layer Moduli Backcalculation ([07-1837](#))**

Jae-Woong Choi, University of California, Berkeley

Rongzong Wu, University of California, Davis

Juan M. Pestana, University of California, Berkeley

**Industry-Specific Correlations Between Demand for Transportation and Communications in the U.S. Economy, 1947-1997 ([07-2385](#))**

Taihyeong Lee, University of California, Davis

Patricia L. Mokhtarian, University of California, Davis

**Using Longitudinal Surveys to Understand the Changing Nature of ICT Use and Travel ([07-3312](#))**

Ryan D. Wilson, University of Minnesota, Twin Cities

Kevin J. Krizek, University of Minnesota, Twin Cities

Susan L. Handy, University of California, Davis

**Exploring Causal Connections Among Job Accessibility, Employment, Income, and Automobile Ownership Using Structural Equations Modeling ([07-1027](#))**

Shengyi Gao, University of California, Davis

Patricia L. Mokhtarian, University of California, Davis

Robert A. Johnston, University of California, Davis

**The Impact of the Residential Built Environment on Work at Home Adoption and Frequency: An Example from Northern California ([07-3005](#))**

Wei Tang, University of California, Davis

Patricia L. Mokhtarian, University of California, Davis

Susan L. Handy, University of California, Davis

**Do Transportation and Communications Tend to Be Substitutes, Complements, or Neither? U.S. Consumer Expenditures Perspective, 1984-2002 ([07-1798](#))**

Sangho Choo, Korea Transport Institute

Taihyeong Lee, University of California, Davis

Patricia L. Mokhtarian, University of California, Davis

**Transportation Asset Management and Visualization Using Semantic Models and Google Earth ([07-0570](#))**

Michael T. Darter, University of California, Davis

Ty A. Lasky, University of California, Davis

Bahram Ravani, University of California, Davis

**Laboratory Evaluation of Fiber-Reinforced Polymer Dowel Bars for Jointed Concrete Pavements ([07-2450](#))**

Yi Bian, University of California, Davis

Erwin Kohler, University of California, Davis

John Harvey, University of California, Davis

**Calibration of Microsimulation with Heuristic Optimization Methods ([07-1282](#))**

Jingtao Ma, University of California, Davis

Hu Dong, University of California, Davis

H. Michael Zhang, University of California, Davis

**Variational Inequality Formulation for Inferring Dynamic Origin-Destination Travel Demands ([07-1124](#))**

Yu Nie, Northwestern University

H. Michael Zhang, University of California, Davis

**One-Level O-D Estimation Approach Based on Relaxation ([07-1122](#))**

Yu Nie, Northwestern University

H. Michael Zhang, University of California, Davis

**Dwight David Eisenhower Transportation Fellowship Program Research Showcase:  
Economic and Environmental Impacts of New Motor Vehicle Trends on Low-  
Income Households ([P07-0303](#))**

Belinda S. Chen, University of California, Davis

**Solving the Integrated Corridor Control Problem Using Simultaneous Perturbation  
Stochastic Approximation ([07-1065](#))**

Jingtao Ma, University of California, Davis

Yu Nie, University of California, Davis

H. Michael Zhang, University of California, Davis

**Optimal Allocation of Multiple Emergency Service Resources for Critical  
Transportation Infrastructure Protection ([07-0028](#))**

Yongxi Huang, University of California, Davis

Yueyue Fan, University of California, Davis

Ruey Long Cheu, University of Texas, El Paso

**Comparative Analysis: Effect of Trip-Based Versus Link-Based Traffic Data on  
Regional Mobile Emissions Estimation ([07-0319](#))**

Song Bai, University of California, Davis

Yi-Chang Chiu, University of Arizona

Debbie Niemeier, University of California, Davis

**Modeling Idling Reduction Options for Heavy-Duty Diesel Trucks: Comparison of  
Full-Fuel-Cycle Emissions, Energy Use, and Proximity to Urban Populations in Five  
States ([07-3300](#))**

Matthew J. Solomon, University of California, Davis

Christie-Joy Brodrick, James Madison University

Linda Gaines, Argonne National Laboratory

**Project Assessments for 8-hour Ozone Conformity in Isolated Rural Areas ([07-0822](#))**

Jeroen Van Houtte, University of California, Davis

Douglas S. Eisinger, Sonoma Technology Inc.

Debbie Niemeier, University of California, Davis

**Short-Run Gasoline Demand Elasticity: Evidence of Structural Change in the U.S.  
Market for Gasoline ([07-1934](#))**

Jonathan E Hughes, University of California, Davis

Christopher R. Knittel, University of California, Davis

Daniel Sperling, University of California, Davis

**Quick Estimation of Network Performance Measures Using Associative Memory Techniques ([07-0706](#))**

R. Palavadi Naga, University of California, Davis  
Yueyue Fan, University of California, Davis

**Two-Stage Stochastic Programming Model for Transportation Network Retrofit ([07-0705](#))**

Changzheng Liu, University of California, Davis  
Yueyue Fan, University of California, Davis

**Do Changes in Neighborhood Characteristics Lead to Changes in Travel Behavior? Structural Equations Modeling Approach ([07-0735](#))**

Xinyu Cao, North Dakota State University  
Patricia L. Mokhtarian, University of California, Davis  
Susan L. Handy, University of California, Davis

**Effect of Fatigue Damage on Complex Modulus Master Curves of Asphalt-Aggregate Mixes ([07-3139](#))**

Bor-Wen Tsai, University of California, Berkeley  
John Harvey, University of California, Davis

**The Transition to Electric Bikes in China: Effect on Travel Behavior, Mode Shift, and User Safety Perceptions in a Medium-Sized City ([07-1896](#))**

Jonathan Xavier Weinert, University of California, Davis  
Chaktan Ma, Tsinghua University, China  
Xinmiao Yang, Tsinghua University, China  
Christopher R. Cherry, University of California, Berkeley

**Examining Impacts of Residential Self-selection on Travel Behavior: Methodologies and Empirical Findings ([07-0737](#))**

Xinyu Cao, North Dakota State University  
Patricia L. Mokhtarian, University of California, Davis  
Susan L. Handy, University of California, Davis

**Performance of Thin Overlays on Cracked Asphalt Pavements (P07-0354)**

David J. Jones, University of California, Davis

**Performance of New Zealand OGAC Overlays on Very Flexible Pavements Using CAPTIF (P07-0363)**

Bruce Steven, University of California, Davis

**Initial Findings on Skid Resistance of Unpaved Roads ([07-3010](#))**

Jeremy David Lea, University of California, Davis  
David J. Jones, University of California, Davis

**Measurement and Variability of Coefficient of Thermal Expansion for Concrete Pavements ([07-1956](#))\*\***

Erwin Kohler, University of California, Davis

Ramon Fritz Alvarado, University of California, Davis

David J. Jones, University of California, Davis

**Fuel Prices and Transportation: Tipping Point or Too Small to Matter? What Do Consumers Really Want? (P07-0827)**

Daniel Sperling, University of California, Davis

**A Study of First-in First-out Violation in Freeway Traffic ([07-1174](#))**

Wen-Long Jin, University of Science and Technology, China

Ling Li, University of California, Davis

**Elastic Nonlinear Finite Element Analysis of Flexible CAPTIF Pavement Subjected to Varying Falling-Weight Deflectometer Loads ([07-1788](#))**

Bruce Steven, University of California, Davis

David Alabaster, Transit New Zealand

John James de Pont, Transport Engineering Research New Zealand Ltd

**Variational Inequality Formulation for Inferring Dynamic Origin-Destination Travel Demand ([07-1124](#)) (P07-1120)**

Yu Nie, Northwestern University

H. Michael Zhang, University of California, Davis

**One-Level OD Estimation Approach Based on Relaxation ([07-1122](#)) (P07-1121)**

Yu Nie, Northwestern University

H. Michael Zhang, University of California, Davis

**Inclusion of Moisture Effect in Fatigue Test for Asphalt Pavements ([07-2060](#))**

Qing Lu, University of California, Davis

John Harvey, University of California, Davis

**Individual Responses to Congestion Policies: Modeling Consideration of Factor-Based Travel-Related Strategy Bundles ([07-0462](#))**

Sangho Choo, Korea Transport Institute

Patricia L. Mokhtarian, University of California, Davis