

CALL FOR PAPERS

Innovations in Travel Modeling 2010

A Transportation Research Board Conference

May 9-12, 2010 in Tempe, Arizona

Jointly sponsored by the Transportation Research Board, Federal Highway Administration, Federal Transit Administration, Arizona State University, University of Arizona, Arizona Department of Transportation, Maricopa Association of Governments, Pima Association of Governments, and Valley Metro.

This conference will build on the successful ITM06 conference in Austin and the ITM08 conference in Portland, examining innovative and promising advances in travel modeling, with an emphasis on bridging the gap between state-of-the-art research and practice. The conference will focus on an open exchange of ideas between researchers and practitioners regarding recent innovations in travel modeling, opportunities and challenges related to implementation, and directions for further research and development.

Researchers and practitioners are encouraged to submit short papers (1500-2500 words) for possible inclusion in the conference program. Interested authors should submit their short papers electronically through the conference website (<http://itm2010.fulton.asu.edu>) by October 31, 2009. The conference committee welcomes submissions on a wide range of topics related to innovations in travel modeling. Topic areas of interest include, but are not necessarily limited to:

Uncertainty analysis and decision-making under risk

- Sources and level of uncertainty in travel forecasts and how that information is used in the planning process
- Identification of user benefits and distributional impacts on economic welfare
- Methods for model system sensitivity testing
- Communicating uncertainty in forecasts

Non-motorized and ancillary travel behavior

- Modeling pedestrian and bicycle modes of travel
- Disaggregate approaches to modeling transit access
- Integrated motorized and non-motorized travel representation
- Parking location choices and pricing
- Incorporation of disaggregate land use data

Reliability

- Quantification and measurement of travel time reliability for highway and transit operations
- Statistical evidence on impact of reliability on travel choices and value of reliability
- Incorporating reliability measures in travel models and network simulation tools

- Incorporating reliability measures in user benefits for passenger travel and freight movements

Modeling technological change and emerging policy contexts/applications

- New developments in activity-based analysis of travel such as new commuting patterns, compressed schedules, telecommuting, self-employment, etc.
- Applications of activity-based model systems to emerging policy contexts such as pricing policies, climate change, homeland security and emergency response, and sustainable land use development initiatives
- Models of behavioral interactions and decision processes that inform the specification of emerging micro-simulation model systems
- Modeling the influence of telecommunications and e-commerce on travel patterns
- Advances in models of vehicle ownership and fleet composition
- Modeling energy consumption and emissions impacts of travel choices

New developments in dynamic traffic assignment and micro-simulation models

- Integration with activity-based demand models
- Practical experience and performance characteristics
- Network representation and traveler response to pricing strategies
- Network representation and traveler response to real-time traveler information strategies

Using new sources of information for model development and calibration

- Use of data from GPS, smart cards and other new technologies
- Use of operations data
- Representation of relevant variables

Understanding, modeling, and forecasting freight movements and commercial vehicle travel

- Use of data from GPS and other new collection technologies
- Mode choice and other disaggregate methods
- Accounting for supply chain logistics
- Applications to emerging policy contexts such as pricing policies, climate change, and information technology

Integrated micro-simulation of land use and travel choices

- Population synthesis and demographic forecasting at small spatial scales
- Incorporating socio-economic and behavioral dynamics in model systems
- Applications to determine effects of emerging policies on regional development patterns
- New developments in the visualization of activity-travel patterns in time and space

Computational Challenges for Advanced Models

- Advanced algorithms
- Sampling strategies
- Distributed processing
- Optimizing processing times
- Implementation issues