

TRANSPORTATION SEMINAR

(How) Can We Improve the Behavioral Realism of Large-Scale Land Use/Transportation Models?

Friday, March 31, 2017
3:00pm to 4:30pm

Please join us in Schwada Building (SCOB) room 101 

Patricia Mokhtarian, Ph.D.

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In view of the rapidly changing social, technological, and policy landscape, it has never been more crucial to understand and predict the impacts of broad-based trends on travel behavior. Yet our ability to do so is hampered by the absence from our models of a major class of variables that has been demonstrated to be vital to nearly every decision people make – namely, attitudes. Commonly-advanced reasons for this neglect include that attitudes are difficult to measure, analyze, and forecast. This talk outlines a far-reaching new initiative for incorporating attitudinal information into large-scale regional models, without adding (many) new questions to travel/activity diary surveys. In a proof-of-concept study, we use machine learning methods to impute attitudes measured in a small-scale ($N = 2,352$) survey into the 2009 National Household Travel Survey dataset ($N = 91,362$). Preliminary results show modest but promising improvements in the ability to predict vehicle ownership using the imputed attitudes.

Patricia Mokhtarian is the Susan G. and Christopher D. Pappas Professor of Civil and Environmental Engineering (CEE) at the Georgia Institute of Technology. She joined Georgia Tech in 2013, after 23 years on the faculty at the University of California, Davis. At UCD she was Associate Director of the Institute of Transportation Studies, and founding Chair of the interdisciplinary MS/PhD program in Transportation Technology and Policy as well as a Professor of CEE. Prior to joining UC Davis in 1990, she spent nine years in regional planning and consulting in Southern California. Dr. Mokhtarian has studied travel behavior for nearly 40 years, specializing in the impact of telecommunications technology on travel behavior, attitudes toward mobility, and the impacts of land use on travel behavior, among other areas. She is an editor of *Transportation*, and serves on the editorial boards of six other transportation journals. Dr. Mokhtarian currently chairs the International Association for Travel Behaviour Research, and is an active member of one and emeritus member of two committees of the Transportation Research Board.



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