

TRANSPORTATION SEMINAR

Agent-Based Modeling and Simulation for Integrated Transportation Operations and Planning

Friday, November 14, 2014
3:00pm to 4:30pm

Please join us in College Avenue Commons room 425 📍



Lei Zhang

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The urban transportation system today is characterized with several critical issues including congestion, safety, energy consumption, pollution and carbon emissions, and socio-economic impact. The key to successfully addressing these issues is a thorough understanding of the transportation system dynamics, the interactions between users and networks, and system responses to centralized or distributed control and intervention strategies. This research develops comprehensive models of travel behavior and traffic dynamics with agent-based and simulation-based optimization methods. Such models are capable of solving a variety of transportation planning and traffic operations problems, and especially valuable for analyzing innovative strategies such as integrated and active corridor traffic management, travel demand management, and sustainable land development.

Dr. Lei Zhang is an Associate Professor and Director of the National Transportation Center in the Department of Civil and Environmental Engineering at the University of Maryland – College Park (UMD). He received his B.S. in Civil Engineering from Tsinghua University, and his M.S. degrees in Civil Engineering and Applied Economics and a Ph.D. degree in Transportation Engineering from the University of Minnesota. Dr. Zhang has published more than 70 peer-reviewed journal articles and 120 refereed conference papers on topics including transportation planning, transportation economics and policy, travel behavior, advanced travel demand modeling, transportation data and survey methods, and traffic operations.



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