

Institute of Transportation Engineers Arizona State University



School of Sustainable Engineering and the Built Environment *Transportation Seminar Series*

Avoid Traffic, Get Rewarded—Paradigm Shift for Urban Traffic Congestion Management through Active Transportation Demand Management and Mobile Computing

Yi-Chang Chiu, Ph.D.

Associate Professor, The University of Arizona

Date: Wednesday, December 4, 2013

Time: 10:30 AM— 11:30 AM

Location: GWC 487 (Parking)

Lunch will be provided



Speaker

Dr. Chiu is the Associate Professor at the Department of Civil Engineering and Engineering Mechanics at the University of Arizona (UA). He received his Ph.D. degree in transportation engineering from the University of Texas at Austin in 2002. His research activities include theoretical development and applications of dynamic traffic simulation and assignment models in regional and corridor analysis, multi-resolution simulation assignment theories and applications, large-scale emergency evacuation modeling, system dynamics and interdependence modeling, and intelligent transportation system modeling. Dr. Chiu is the principal developer of the open source DynusT DTA model which currently has more than 400 agency users world-wide. The latest Smartrek technology is the paradigm shift aiming to solve the urban traffic congestion problem from a new perspective.

Abstract

In this talk, Dr. Chiu will present a recently envisioned active transportation demand management ecosystem concept and developed technology platform. This technology permits a new opportunity to effectively manage urban congestion via providing accurate predictive travel time and incentivizing commuters to leave earlier/later or taking an alternative route. The new paradigm calls for the participation of transportation agencies (to jump start the program and provide city-own assets), employers (to provide flex hours and internal incentives), commuters (to use the developed application to plan for alternative departure time and routes), and merchants and vendors (to participate and provide incentives). The new paradigm has received overwhelming support and interest from many transportation agencies in the U.S. and overseas. Technical research challenges, solutions, as well as considerations in the ecosystem developments will be discussed.

ALL ARE WELCOME!