Linking Transportation System Management Operations and Active Demand Management. What Have We Learned and Where does the Future Go?

Thursday, August 31, 2017
Noon to 1 PM

Please join us in College Avenue Commons (CAVC) room 425

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The University of Arizona

Traditionally, transportation system management operation (TSMO) and demand management (ADM) have been conceived and implemented independently by transportation agencies. In 2015, after three years of developments, Dr. Chiu synergized the university and venture resources to launch a platform called Metropia to pilot the concept of linking TSMO and ADM in several US cities. After two years of deployment, a vast amount of data has been collected, and comprehensive system and behavioral insights have been explored and revealed. In this presentation, Dr. Chiu and his doctoral student Ali Arian will share the findings, lesson learned, and insights from this journey and discuss where the future may unfold.

Dr. Chiu (Ph.D., Transportation Engineering, University of Texas Austin, 2002) is an Associate Professor at the Department of Civil Engineering and Engineering Mechanics at the University of Arizona and the founder of Metropia, Inc. He started his academic career as a well-known researcher in the area of simulation-based dynamic traffic assignment (DTA). Dr. Chiu has been a principal developer and consultant to FHWA on the DTA program in the 2010s. One of the hallmark tools originating from his research career is DynusT, a large-scale open source DTA model that is currently the most widely used DTA model internationally. Dr. Chiu's vision and leadership led to the development of Metropia in 2012 as an information and incentive-based personal mobility and transportation system management platform, bringing a revolutionary concept to future urban mobility management. Metropia utilizes real-time traffic and incident data and advanced traffic prediction and incentive algorithms to predict future traffic conditions and to use dynamically adjusted incentives as a mechanism to shift demand to less congested times, routes, and modes. The goal is to seamlessly and cost-effectively integrate multiple modes so that driving-alone is not the only option. Metropia serves as the prime contractor for two recent major MaaS&T deployments in the US (Houston, Texas and Pima County, Arizona) funded by the Federal Highway Administration and Federal Transit Administration.

Ali Arian is a research assistant and Ph.D. student of Civil Engineering and Engineering Mechanics at The University of Arizona (UA). His research at UA includes traveler behavior modeling, dynamic traffic assignment and discovery of hidden information in emerging mobility services system and behavior data. Before joining UA, he obtained his bachelor's degree in civil engineering at the Sharif University of Technology in Tehran, Iran.

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