

TRANSPORTATION SEMINAR

Solving Large-scale Ride-sharing Problem: From Mathematical Model to Real-world Solutions

Friday, September 11th, 2015

3:00pm to 4:30pm, College Avenue Commons, room 425

Abstract: Given emerging trend of self-driving cars is likely to create a revolutionary paradigm shift for real-time traffic system automation and control. We (a group of doctoral, Master and undergraduate students from ASU) are motivated to focus on network optimization and pricing aspects of the self-driving cars use mode, shared autonomous vehicles. In this talk, we propose a new time-discretized multi-commodity network flow model for the pickup and delivery problem with time windows for large-scale real-world applications with both mathematically rigorous exact solution algorithms and practically useful heuristic methods. Special guests from our local ridesharing company, RubyRide, are also invited to present their latest research development.



Monireh Mahmoudi

Ph. D. Student, School of Sustainable Engineering and the Built Environment, Arizona State University

Monireh received her master of science in Industrial Engineering from Tehran Polytechnic in Iran. From her master, she found her interest in the application of Operations Research in transportation area. Monireh shifted her major to the transportation program in her PhD. Her presentation at INFORMS 2014 (San Francisco, CA) attracted good attention from Uber and other transportation network companies.



Hossein Jalali

Graduate Research Assistant, School of Sustainable Engineering and the Built Environment, Arizona State University

Hossein received his BSc in Civil Engineering from BUW, Germany. Currently, he is graduate student in Civil Engineering with emphasis on advanced transportation systems.



De'Von Jennings

Undergraduate Research Assistant, School of Sustainable Engineering and the Built Environment, Arizona State University

De'Von is a senior majoring in Civil Engineering. He was NASA Space Research Grant recipient in 2014-2015. He is a recipient of the Bill and Melinda Gates Scholarship. De'Von is working on a learning document for ride-sharing problems. The undergraduate research assistant will explain basic concepts of the constraints and modeling of the optimization problems.



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