Designing a transportation marketplace

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Abstract: The landscape of urban transportation and logistics has changed dramatically in the past a few years with the rise of online marketplace and sharing economy. This technological and economic development opens up tremendous new research opportunities which draw various techniques in operations research. In this talk, I will discuss the distinctive features of a transportation marketplace as compared to other two-sided markets and present essential models, some of my recent work and emerging exciting problems in optimizing such marketplaces.

Bio: Dr. Chiwei Yan is an Assistant Professor in the Department of Industrial and Systems Engineering at the University of Washington, Seattle. His research centers around transportation and logistics systems, with a recent focus on emerging problems in sharing economy and online platforms. He also has a particular interest in air transportation systems. His work aims to study fundamental properties of these problems and propose (data-driven) practical solutions for implementation. When analyzing these problems, he is broadly interested in tools from optimization, game theory, stochastic modeling and statistics. He is a recipient of the Best Dissertation Award Honorable Mention and the Outstanding Paper Award in Air Transportation from INFORMS Transportation Science and Logistics Society, the Best Dissertation Award from INFORMS Aviation Application Section, and the AGIFORS Anna Valicek Award of Airline Operations Research, among others. He received his PhD in Operations Research from MIT in 2017 and his bachelor degree in Industrial Engineering from Tsinghua University in 2012. Before joining UW, he was a postdoctoral researcher and a senior data scientist at Uber's marketplace group where he designed the current version of rider surge pricing algorithm which balances demand and supply in real-time.