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9:00 – 10:30 am (PT)/6:00-7:30 pm (CEST)

Register here: https://uci.zoom.us/meeting/register/tJAlcOGgqj0pHNli_gwgGueSBLb8XA9uTSzE

Analysis of ride-hail service with pooling: From matching to management



Dr. Kenan Zhang

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Tenure-track Assistant Professor, EPFL (2023 September)

Abstract

The past decade has witnessed a rapid growth of e-hail service provided by transportation network companies (TNCs), such as Uber and Lyft. However, e-hail service not only suffers from unexpected efficiency losses under certain market conditions, but also intensifies traffic congestion in some big cities. Partly motivated by these concerns, TNCs introduced pooling to complement the regular e-hail service. In this talk, I will first present a physical matching model that distinguishes regular e-hail and pooling services, then incorporate it into the equilibrium analysis to investigate the platform's operational strategies and the impact of regulations. The base model is further extended to discuss platform competition and congestion pricing targeted at TNC vehicles.

Dr. Kenan Zhang is a postdoctoral researcher in the Automatic Control Laboratory at ETH Zurich. She will join EPFL as a tenure-track Assistant Professor in September 2023. Kenan obtained her PhD in Transportation Engineering from Northwestern University in 2021, where she also received an MS degree in Statistics. She completed her master's study at Carnegie Mellon University in 2015 and undergraduate study at Tsinghua University in 2014, both in Civil Engineering. Her research focuses on the mathematical modeling and optimization of urban transportation systems, with special interests in emerging mobility services and technologies. She is also broadly interested in the applications of game theory and machine learning in transportation.