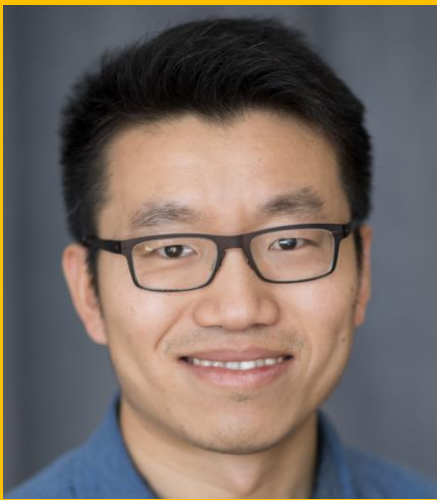


CIDSE Invited Talk

with Dr. Zhiwei (Tony) Qin

Deep Reinforcement Learning in Ride-sharing Marketplace



Wednesday, October 23rd, 2019

10:45 AM

CAVC 359

Abstract:

With the rising prevalence of smart mobile phones in our daily life, online ride-hailing platforms have emerged as a viable solution to provide more timely and personalized transportation service, led by such companies as DiDi, Uber, and Lyft. These platforms also allow idle vehicle vacancy to be more effectively utilized to meet the growing need of on-demand transportation, by connecting potential mobility requests to eligible drivers. In this talk, we will discuss our train of research on ride-hailing marketplace optimization at DiDi, in particular, order dispatching and driver repositioning. We will show single-agent and multi-agent RL formulations and how value function can be designed to leverage different amount of information and also facilitate knowledge transfer.

BIO:

Dr. Zhiwei (Tony) Qin leads the reinforcement learning research at DiDi AI Labs, working on core problems in ride-sharing marketplace optimization. He received his Ph.D. in Operations Research from Columbia University and B.Sc. in Computer Science and Statistics from the University of British Columbia, Vancouver. Tony is broadly interested in research topics at the intersection of optimization and machine learning, and most recently in reinforcement learning and its applications in operational optimization, digital marketing, traffic signals control, and education. He has published in top-tier conferences and journals in machine learning and optimization and served as PC of NeurIPS, AAAI, IJCAI, and KDD. He received Best Demo Award in NeurIPS 2018 and holds more than 10 US patents.

Hosted by: Huan Liu & Subbarao Kambhampati