Contact Information

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Education

University of Michigan, Ann Arbor, MI

Ph.D. in Civil & Environmental Engineering *Expected:* Spring 2022

- Next Generation Transportation Systems (NGTS) program

M.A. in Economics *Expected:* Spring 2022

- Relevant coursework (PhD Level): Microeconomic Theory I-IV, Macroeconomic Theory I, Macroeconomic Theory II (Winter 2021), Industrial Organization and Public Policy I-II, Econometric Analysis I

Massachusetts Institute of Technology (MIT), Cambridge, MA

B.Sc. in Mechanical Engineering June 2017

My research interests lie at the intersection of economics and emerging technologies. Currently, my work is centered on mobility systems such as ridesourcing and automated vehicles and I focus on:

- Modeling and analyzing the ridesourcing market to inform policy-making. Working papers:
  - **Regulating the ridesourcing market in the presence of congestion externality and product differentiation**: As ridesourcing services have gained in popularity, they have also generated congestion externality which regulators have sought to address. They also provide, through their pooling feature, the potential to alleviate congestion by maximizing vehicle occupancy. To help inform regulation in this area, we propose a model of the ridesourcing market with congestion externality and the provision of both solo and pooling services. We analyze both the first-best and monopoly equilibria in that market and investigate the use of a commission cap and a congestion toll to address both the monopoly's market power and the congestion externality. (*In collaboration with Dr Yafeng Yin and Dr Jintao Ke*)
  - **Spatial competition in the ride-for-hire market: Uber vs taxi** (*In collaboration with Dr Yafeng Yin and Dr Jintao Ke*)
- Understanding the drivers and impediments to automated driving technology deployment and adoption. Working papers:
  - **An economic analysis of a vehicle-infrastructure cooperative approach to automated driving**: While automakers have heavily invested in making vehicles fully autonomous, challenges remain before commercialization. Thus, some advocate for equipping infrastructure to either cooperate with or totally control vehicles in order to achieve automated driving. However, research on a vehicle-infrastructure cooperative approach to automated driving is scarce. Therefore, we propose and analyze a framework to make the case for such an approach both from a public and a private perspective. We show that such an integrated approach is socially optimal, and that a lack of cooperation between automakers and road operators can lead to sub-optimal investment in vehicle and infrastructure technology. (*In collaboration with Dr Yafeng Yin and Dr Sina Bahrami*)