

Title and Abstract:

Providing Reliable Transportation at Uber

Ridesharing is revolutionizing transportation in cities. A central task in ridesharing is providing reliable transportation to riders and attractive earnings to drivers when neither group is under centralized control. This is especially challenging given that weather, traffic, sporting events, and holidays frequently cause hard-to-predict imbalances between riders' and drivers' willingness to participate in the market. We discuss approaches and mathematical models used at Uber to overcome this challenge, and provide an overview of other exciting new research questions in transportation opened by the growth of ridesharing.

Bio:

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Dr. Peter Frazier is an Associate Professor in the School of Operations Research and Information Engineering at Cornell University, and a Staff Data Scientist and Data Science Manager at Uber. He received a Ph.D. in Operations Research and Financial Engineering from Princeton University in 2009. His research is in optimal learning, sequential decision-making under uncertainty, and machine learning, focusing on applications in simulation, e-commerce, medicine, and biology. He is an associate editor for Operations Research, ACM TOMACS, and IISE Transactions, and is the recipient of an AFOSR Young Investigator Award and an NSF CAREER Award.