



Time Varying Queues

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In this talk, I will discuss the how time varying queues arise naturally in our society and how we can use differential equations, stochastic processes, and queueing theory to describe the phenomena around us. This talk will describe how to use and extend standard techniques to more complicated systems that arise in reality. Examples from Uber dynamics and healthcare dynamics will illustrate these ideas.

Biography

Jamol Pender was born and raised in the Bronx, NY. He received a B.S.E (2008) from the University of Pennsylvania in Electrical and Systems Engineering and a PhD (2013) in Operations Research and Financial Engineering from Princeton University. His PhD thesis in applied probability was titled: “Dynamics Rate Queues: Estimation, Stabilization, and Control.” Currently, he is an Assistant Professor of Operations Research and Information Engineering at Cornell University, where he has been since 2015. His research interests fall into areas of applied probability, which includes queueing theory. His research on time varying queueing systems has been applied in areas such as telecommunications, healthcare, and more recently collaborative economies and smartphone queueing apps. He also has an interest in mathematical finance, especially limit order books and option pricing.