NBER Application: Digital Economics and AI Tutorial

Contact Information

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Graduate Course Information

PhD Program: Operations Management
University: New York University, Stern School of Business
Year of Enrollment: Summer 2022 (Current on the third year)
Advisors: Hanna Halaburda and Joshua Reed

Research Interest:

Main Topics: Social Networks, Stochastic Processes, and Blockchains
Description of Research Interest: My research interest lies in modeling online platforms using a continuous-time approach to uncover new perspectives on incentives and social dynamics. In both of my current projects, I use the arrival of new information to incorporate the time element and show how the behavior of agents can change from a static analysis, as well as how platform policies can be improved in this perspective.

Project 1. Incorporating Time for Interactions on Social Networks

In this project, we study the activity over time on a social network, considering recent models on decision time and how network effects can affect the frequency and synchronicity of the network. Under our model, we show how delaying information and avoiding clusters can increase network activity. Furthermore, we provide a theoretical characterization of how network effects can be incorporated into modeling decision time. Besides theoretical results, we also use data from the social network Bluesky to analyze the timestamps of posts and likes.

Project 2. Strategic Timing of Block Production under Arbitrage Profits

In this project, we analyze how blockchains can have incentives to manipulate the latency of blocks in order to increase the profits from arbitrage trading with centralized markets. To obtain such results, we considered a theoretical model of arbitrage between a pair of assets being traded at a Constant Function Market Maker and a centralized exchange.