

# Scheduling and Pricing Cloud Workloads under Uncertainty



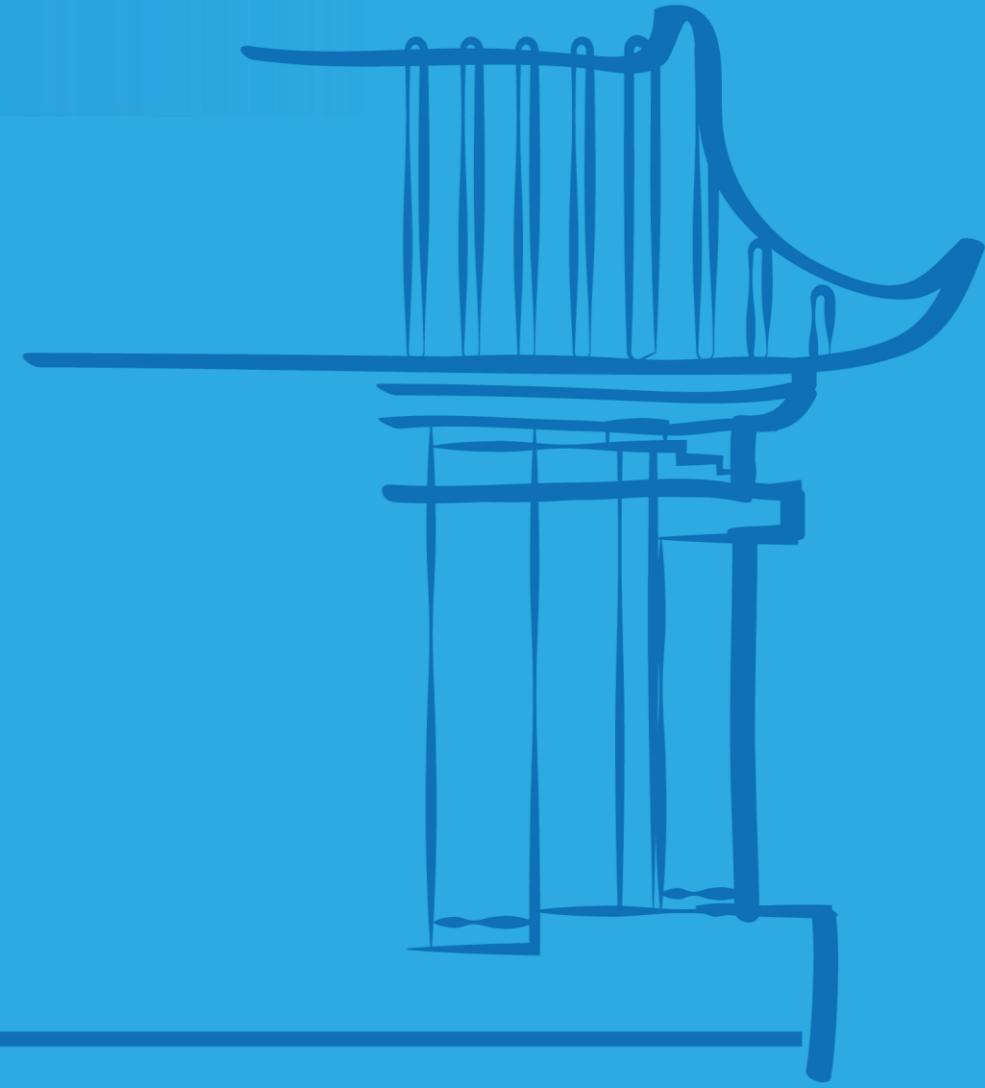
## Dr. Brendan Lucier

Senior Principal Researcher  
Microsoft Research New England

🎤 Host: 孔雨晴 助理教授

🕒 2022年06月10日 星期五 10:00–11:00

📍 在线讲座



## Abstract

Cloud computing customers often submit repeating workloads on approximately regular schedules. This pattern, typical of ML training pipelines, allows customers and the platform to (imperfectly) anticipate future requests. Workload prediction can help a cloud scheduler with allocation decisions, but may be vulnerable to strategic manipulation. In this talk I will describe a model of cloud scheduling with distributional information about upcoming requests. We will explore how to design pricing, scheduling, and eviction mechanisms that account for incentivizes and discourage strategic behavior.

Based on joint work with Moshe Babaioff, Ishai Menache, Ronny Lempel, Aleksandrs Slivkins, and Sam Wong.

## Biography

Brendan Lucier is a Senior Principal Researcher at Microsoft Research New England. Brendan's research combines tools and models from theoretical computer science, game theory, and microeconomics to predict and impact the behavior of individuals as they interact with platforms and markets. He specializes in mechanism design and pricing theory, especially as it relates to applications such as digital advertising, cloud computing, and markets for sustainability.