

The Hong Kong University of Science and Technology
Dept of Information Systems, Business Statistics and Operations
Management
Dept of Industrial Engineering & Decision Analytics

Joint Seminar Announcement



Robustness and Adaptivity Tradeoffs in Learning Algorithms

by

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Date : January 11, 2024 (Thursday)
Time : 10:30 am - 11:45 am
Venue : Case Room 1003, LSK Business Building

Abstract: Multi-armed bandits are widely studied abstractions of sequential decision making problems that allow, among other things, a straightforward study of the so-called exploration-exploitation tradeoff in online learning. Various families of algorithms have been developed over the years and many are now deployed on scale at various technology companies.

In this talk we will present a few vignettes that pertain to robustness and adaptivity properties of common multi-armed Bandit learning algorithms. In particular, we will examine cases under which some “breakdown” phenomena is observed, elucidate distinctions among common algorithms and the manner in which they “break down” or exhibit “robustness,” and discuss some possible fixes.

Bio: Assaf Zeevi is Professor and holder of the Kravis chair at the Graduate School of Business and the Data Science Institute, Columbia University. His research and teaching interests lie at the intersection of Operations Research, Statistics, and Machine Learning. In particular, he has been developing theory and algorithms for reinforcement learning, Bandit problems, stochastic optimization, statistical learning and stochastic networks. Assaf's work has found applications in online retail, healthcare analytics, dynamic pricing, recommender systems, and social learning in online marketplaces.

Assaf received his B.Sc. and M.Sc. (Cum Laude) from the Technion, in Israel, and subsequently his Ph.D. from Stanford University. He spent time as a visitor at Stanford University, the Technion and Tel Aviv University. He is the recipient of several teaching and research awards including a CAREER Award from the National Science Foundation, an IBM Faculty Award, Google Research Award, as well as several best paper awards including the 2019 Lanchester Prize.

All interested are welcome!
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