中央研究院 ACADEMIA SINICA 1928

統計科學研究所
INSTITUTE OF STATISTICAL SCIENCE

Seminar

Title：Online portfolio selection and online learning quantum states

Speaker：Prof. Yen-Huan Li (李彥寰 副教授)
(Department of Computer Science and Information Engineering, National Taiwan University)

Time：10:30 ~ 12:00, Monday, March 11, 2024

Place：Auditorium, B1F, Institute of Statistical Science

Abstract

Optimal online portfolio selection (OPS), with respect to both regret minimization and computational efficiency, has remained an open problem in the field of online learning for over three decades. The problem finds applications ranging from mathematical finance to Poisson inverse problems and the derivation of concentration inequalities. The problem of online learning quantum states is a non-commutative generalization of OPS and is technically even more challenging. In this talk, I will discuss recent breakthroughs in these two problems. Specifically, I will highlight two recent contributions from our work: (1) a simple OPS algorithm that achieves a state-of-the-art trade-off between regret and computational complexity, and (2) the first OPS algorithms that possess data-dependent regret guarantees.

※ Tea reception starts at 10：10.

※ Lecture in English. Online live streaming through Cisco Webex will be available.