

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.

※茶會:10:10開始。

※ 英文演講,實體與線上視訊同步進行。