

MICHIGAN STATE UNIVERSITY
Department of Statistics and Probability

COLLOQUIUM

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Online Learning: Prediction in a Game-Theoretic Framework

Tuesday, April 1
10:20 a.m. - 11:10 am
Refreshments 10:00 am
C405 Wells Hall

Abstract

Online learning is a branch of machine learning that treats sequential prediction problems as a game between a learner and the environment. The aim of online learning algorithms is to incur low regret, in hindsight, on any possible data sequence. Algorithmic developments have produced fast algorithms that only make use of incremental computations. This makes online algorithms well suited to "big-data" problems. On the theoretical side, the analysis of online algorithms reveals fascinating connections with Rademacher complexity and uniform martingale laws of large numbers. My talk will survey some of these recent advances. No prior knowledge of online learning will be assumed.

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