FRIEDRICH-SCHILLER-
UNIVERSITÄT
JENA
Fakultät für Mathematik und Informatik

Institut für Mathematik

Seminar zur Stochastik

Dienstag, 14. Januar 2025
14 Uhr s.t.
SR 121, Carl-Zeiß-Str. 3

Philip Le Borne
(Christian-Albrechts-Universität zu Kiel)

"Learning to steer with Brownian noise"

Abstract: In this talk, we consider an ergodic version of the bounded velocity follower problem, where we assume that the decision maker lacks knowledge of the underlying system parameters and must learn them while simultaneously controlling. We introduce algorithms based on moving empirical averages and develop a framework for integrating statistical methods with stochastic control theory. Our primary result is a logarithmic expected regret rate. To achieve this, we conduct an analysis of the ergodic convergence rates of the underlying processes and the risks of the considered estimators.

Alle Interessierte sind herzlich eingeladen!

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