Supermartingale shadow couplings

INVITED SPEAKER
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TIME
December 12, 2022 (Monday) · 3:30 pm - 4:30 pm

VENUE
Zoom ID: 606 898 8598 · Password: cuhkstat · Zoom link

ABSTRACT
A classical result of Strassen asserts that given two probability measures on the real line which are in convex-decreasing order, there exists a supermartingale with these marginals. However, it is a non-trivial problem to construct particular (or canonical) supermartingales with prescribed marginals. In this talk we introduce a family of such supermartingales, each of which admits canonical characterization in terms of stochastic dominance. We explicit construct the extreme elements (of this family) that solve the optimal transport problem with supermartingale constraints.