The Hong Kong Polytechnic University
Department of Applied Mathematics

Seminar

Short- and long-term relative arbitrage in stochastic portfolio theory

by

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Abstract

A basic result in Stochastic Portfolio Theory states that a mild nondegeneracy condition suffices to guarantee long-term relative arbitrage, that is, the possibility to outperform the market over sufficiently long time horizons. A longstanding open question has been whether short-term relative arbitrage is also implied. Fernholz, Karatzas & Ruf recently showed that it is not, without giving tight bounds on the critical time horizon. We connect existence of relative arbitrage to a certain geometric PDE describing mean curvature flow, and use properties of such flows to compute the critical time horizon. Joint work with Johannes Ruf.

Date :   3 September, 2018 (Monday)
Time :   4:00p.m. – 5:00p.m.
Venue : TU801, The Hong Kong Polytechnic University

* * *   ALL ARE WELCOME   * * *