The Hong Kong University of Science and Technology

Department of Mathematics

Seminar on Financial Mathematics

Cost Efficiency in Incomplete Markets

by

Prof. Stephan Sturm
Worcester Polytechnic Institute

Abstract:
We establish a cost efficiency principle that allows to characterize the optimizer of general portfolio optimization problems in distributional terms: The price of a cost-minimizing strategy is identified as the minimal superhedging price of random variables dominated in convex order. This result relies on a minimax theorem on the cone of nonnegative random variables and lends itself to a wide array of applications, such as the distribution builder approach to portfolio optimization, the evaluation of the performance of hedge fund managers and the re-interpretation of results of behavioral finance in classical terms. This is joint work with Carole Bernard.

> *Date:*   *Tuesday, 13 February 2018*
>
> *Time:*   *4:30 pm – 5:30 pm*
>
> *Venue:*   *Room 3598, Academic Building, (Lifts 27&28), HKUST*

All are welcome!