

Hong Kong - Singapore joint Seminar Series in Financial Mathematics/Engineering

A dual approach to partial hedging Professor Jean-François Chassagneux Université Paris Cité, France

Abstract

We introduce a class of 'weak hedging problem' which contains as special examples the quantile hedging problem (Föllmer Leukert 1999) and PnL matching problem (introduced in Bouchard & Vu 2012). We show that they can generally be rewritten as a kind of Monge transport problem. Using this observation, we introduce a Kantorovich version of the problem and, in some cases, we are able to prove a dual formulation. This allows us to design numerical methods based on SGD algorithms to compute the weak hedging price.

This is a joint work with C. Bénézet (ENSIIE) and M. Yang (Université Paris Cité).

About the speaker

Jean-François Chassagneux is Professor in applied mathematics at Université Paris Cité and member of the Laboratoire de Probabilité, Statistiques et Modélisation. His research has been focusing on theoretical and numerical probabilistic methods for non-linear PDEs and non-linear processes in mathematical finance.

Date

27 Oct 2022(Thursday)
(HK Time)

Time

3:00pm – 4:00pm (HK
Time)

Zoom

<https://cityu.zoom.us/j/93069834833?pwd=dVZ4MUF0aWdPUmxYTIdlaEtudWZnUT09>

Meeting ID:

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Passcode:

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