Partial hedging: a numerical scheme

Cyril Benezet, AXA et LPSM

Mots-clés :

In this talk, we are going to introduce the partial hedging problem in mathematical finance. First, we present the stochastic optimal control problem and the PDE that the value function solves (in the viscosity sense), together with the comparison theorem, which ensures uniqueness for the solution of the PDE. We then introduce a numerical scheme to approximate the solution. This numerical scheme is based on Piecewise Constant Policy Timestepping (PCPT). We prove its convergence and show some numerical examples. This is a joint work with Jean-Franois Chassagneux and Christoph Reisinger.

Références