FP7 Marie Curie ITN "Controlled systems" project

Spring School "Stochastic Analysis in Finance"

Roscoff, 6-15 March 2012

Chao ZHOU

Robust Utility Maximization in Non-dominated Models and 2BSDEs with Quadratic Growth

Abstract: We consider the problem of robust utility maximization in an incomplete market with volatility uncertainty. The set of all possible models (probability measures) considered here is non-dominated. We propose to study this problem in the framework of second order backward stochastic differential equations with quadratic growth generator. We solve it for exponential, power and logarithmic utility functions and prove existence of an optimal strategy. This is a joint work with A. Matoussi and D. Possamaï.