

Stochastic Analysis Seminar (SAS)
Monday April 21 & 28, 2008 12:30pm - 1:20pm
Bendheim Center Classroom

Speaker
Stephane Crepey, Université d'Evry

FIRST TALK:

Title: Valuation and Hedging of Defaultable Options (joint work with Tom Bielecki, Monique Jeanblanc and Marek Rutkowski; Working papers available on www.defaultrisk.com).

Abstract: This is a survey of recent research by the authors on valuation and hedging of defaultable options (vulnerable European, American or Game Claims).

SECOND TALK:

Title: Reflected and Doubly Reflected BSDEs with Jumps: A Priori Estimates and Comparison (joint work with Anis Matoussi; Forthcoming in *Annals of Applied Probability*)

Abstract: It is now established that under quite general circumstances, including in models with jumps, existence of a solution to a reflected BSDE is guaranteed under mild conditions, whereas existence of a solution to a doubly reflected BSDE is essentially equivalent to the so-called Mokobodski condition. As for uniqueness of solutions, it holds under mild integrability conditions. However, for practical purposes, existence and uniqueness is not enough. In order to give further developments to these results in Markovian set-ups, one also need a (simply or doubly) reflected BSDE to be well-posed, in the sense that the solution satisfies suitable *bound and error estimates*, and one further needs a suitable *comparison theorem*. In this work we derive such estimates and comparison results. In the last part applicability of the results is illustrated on a pricing problem in finance.