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*Stochastic Correlation in the Valuation of Low-Dimensional Derivative Contracts*

In this talk, several methods of valuation of low-dimensional derivatives, like spread options, are considered. Special emphasis is given to methods based on numerical solutions using recombining trees and/or characteristic functions. A more realistic approach towards dependence structure is achieved by working with continuous time processes that capture stylized facts as stochastic correlation among stocks and volatilities. Standard constant correlation tree methods are enriched with the notion of stochastic correlation, leading to recombining trees that show fast rate of convergence and are easy to implement. The sensitivity and hedging analyses with respect to the stochastic correlation parameters are performed, showing that a constant correlation model systematically overprices both the spread option value as well as the hedging parameters.