

October 28th, 2019

KAP 414

2:00 P.M. – 3:00 P.M.

Professor Dilip Madan

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“Dynamic Nonlinear Valuation and Hedging”

Abstract: Nonlinear valuation methodologies related to solutions of pure jump Backward Stochastic Partial Integro-Differential Equations are introduced. The valuations are based on distorting tail exposures using measure distortions. Value maximizing hedges are formulated for an options book in a Markovian context when the stock is modeled as a spatially inhomogeneous bilateral gamma process. The hedging methodology is illustrated on a book of options on SPY.