UC3M–ICMAT Seminar – 2014

Applied Probability and Statistics

Black-Scholes and beyond: an introduction to modern derivative pricing

Manuel Ponce Escudero (JP Morgan, London))

Wednesday, April 23, 2014
11h00, *ICMAT, Aula Gris I*

We start this talk introducing the Nobel Prize winning formula derived by F. Black, M. Scholes and R. Merton to price an option on an asset. The formula is obtained by solving the partial differential equation satisfied by the option's price over time. Their work led to the development of the risk-neutral valuation of derivatives and is commonly credited as the foundation of Mathematical Finance.

After reviewing the Black–Scholes–Merton model and its assumptions, different models introduced by practitioners in order to overcome the limitations of this framework will be presented. We will put a special emphasis on the two different classes of models known as local volatility and stochastic volatility models.

Instituto de Ciencias Matematicas
Campus de Cantoblanco UAM
C/ Nicolás Cabrera 13-15
28049 Madrid, Spain
www.icmat.es