1035-60-308   **Rene A Carmona*** (`rcarmona@princeton.edu`), ORFE, Princeton University, Princeton, NJ 08544. *Local Volatility Stochastic Dynamics as a Building Block for Equity Market Models.*

The talk is concerned with the characterization of arbitrage free dynamic stochastic models for the equity markets when Itô stochastic differential equations are used to model the dynamics of a set of basic instruments including, but not limited to, the underliers. We study these market models in the framework of the HJM philosophy originally articulated for Treasury bond markets. The approach to dynamic equity models which we follow was originally advocated by Derman and Kani in a rather informal way. We develop a rigorous mathematical program, with explicit formulae, rigorous proofs and numerical examples. (Received August 31, 2007)