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Gerard P Brunick*, gerard.brunick@constellation.com. *A Constructive Approach to Local Volatility Models.*

The traditional approach to local volatility models uses the Fokker-Planck or Kolmogorov forward equation to connect the one-dimensional marginal distributions and the infinitesimal generator of a diffusion process. In this talk, we will offer a construction approach to local volatility models which avoids the use of PDEs. This approach has the advantage that it extends naturally to handle some path-dependent options, and it also allows for the relaxation of the technical conditions which seem to be necessary for a PDE-based argument. (Received January 20, 2015)