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Ionut Florescu* (ifloresc@stevens.edu), Department of Mathematical Sciences, Stevens Institute of Technology, Hoboken, NJ 07030. *Stochastic Volatility models: Leverage effect in continuous time.*

The relationship between the return of an asset and the volatility of the asset has been well documented in the financial literature. Named the *leverage effect* or sometimes *risk-premium* effect, it is observed that, when the return of the asset decreases, the volatility increases and vice-versa. In this talk we investigate the consequences of the various specifications of stochastic volatility models on the leverage effect. We derive explicit conditions for the existence of leverage effect in continuous time stochastic volatility models, and we show that its appearance is not necessarily connected to the correlation between the driving Brownian motions. We explicitly calculate the leverage effect for specific examples of stochastic volatility models. (Received August 14, 2007)