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*Moment explosions in discrete time stochastic processes.*

The talk describes a class of stochastic processes in discrete time which display moment explosions. Under certain conditions the moments of the stochastic variable remain finite but have a rapid increase which is observed in simulations as an explosion. This phenomenon appears in stochastic growth processes, and Euler discretized versions of stochastic volatility models where the volatility follows a geometric Brownian motion. The moment explosions are related to phase transitions in Lyapunov exponents of the moments. The Lyapunov exponents are computed exactly using large deviations theory, and explosion conditions are obtained. (Received January 05, 2016)