

# Implementation of fractional stochastic volatility model

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Lately, a new class of models in financial mathematics has been proposed. We study a new pricing model with a jump-diffusion process for stock price evolution and with stochastic volatility that follows a fractional *CIR* stochastic differential equation (SDE). As a driving process in the SDE we consider a fractional Brownian motion with Hurst parameter  $H \in (1/2, 1)$ . In this case the volatility process exhibits a long-memory property which has been observed on several financial markets. We propose a procedure for the model calibration to these markets.

## *References*

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