

# A Splitting Strategy for the Calibration of Jump-Diffusion Models

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We present a splitting strategy to identify simultaneously the local-volatility surface and the jump-size distribution from quoted European prices. The underlying model consists of a jump-diffusion driven asset with time and price dependent volatility. Our approach uses a forward Dupire-type partial-integro-differential equation for the option prices to produce a parameter-to-solution map. The ill-posed inverse problem for such map is then solved by means of a Tikhonov-type convex regularization. We shall provide numerical examples that substantiate the robustness of the method both for synthetic and real data.