

High-Frequency Statistics for a Semimartingale with Jump Activity varying with time

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When a discretely observed process has jumps with infinite activity, and in particular when the jumps are not summable, so far all available statistical methods for estimating the spot or integrated volatility, or the degree of jump activity, or the spot or integrated intensity of jumps, suppose that the degree of activity of jumps, also called Blumenthal-Gettoor index, is a constant. In this talk we propose a method which allows the degree of activity to vary with time, and even to be a (reasonable) stochastic process by itself. In this setting, we sketch how one can estimate the spot and integrated volatility, or the spot degree of activity and the associated intensity. The method is based on various versions of the empirical characteristic function of the increments of the observed process.