INFERENCE FOR LÉVY-DRIVEN TIME SERIES MODELS BASED ON HIGH-FREQUENCY DATA

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Lévy-driven continuous-time autoregressive moving average (CARMA) processes have recently been used widely in the modeling of non-uniformly spaced data and as a tool for dealing with high-frequency data of the form $Y_{n\Delta}$, $n = 0, 1, 2, \ldots$, where Δ is small and positive. Such data occur in many fields of application, particularly in finance and the study of turbulence. We examine the properties of the sampled process $(Y_{n\Delta})_{n\in\mathbb{Z}}$, as $\Delta \to 0$ and their application to statistical inference for the underlying CARMA process. Extension of the ideas to a larger class of continuous-time moving average processes will also be discussed.