



Institut für Mathematik

Seminar zur Stochastik

Dienstag, 30. Januar 2018
12 Uhr c. t.
SR 147 UHG, Fürstengraben 1

Herr Prof. Dr. Georgyi Shevchenko
(Taras Shevchenko National University of Kiev, Ukraine)

“Identification of the moving average representation of a stationary stable process”

Abstract: The talk is based on a joint research with Evgeny Spodarev and Jürgen Kampf (Ulm University). We consider the problem of estimation of a symmetric kernel $f: \mathbf{R} \rightarrow \mathbf{R}$ from observations of a stationary random process

$$X(t) = \int_{\mathbf{R}} f(t-s)\Lambda(ds),$$

where Λ is a $S\alpha S$ random measure with independent increments and Lebesgue control measure. This class of stochastic processes includes, e.g., stable CARMA processes which are popular in econometric and financial applications. We use the smoothed version of an empirical self-normalized periodogram of X to construct an estimator for f from observations $X(t_{j,n})$ on a high-frequency expanding grid of points $\{t_{j,n} = j\Delta_n, j = 1, \dots, n\}$. Weak consistency of the estimator as $n \rightarrow \infty$ is shown. We also analyse the performance of the estimates through numerical simulations.

Alle Interessenten sind herzlich eingeladen

Kontakt:
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