

Otto-von-Guericke-Universität Magdeburg
Fakultät für Mathematik

Auf Einladung des Institutes für Mathematische Stochastik spricht

Herr Prof. Dr. Alexander Schnurr
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über das Thema

Ordinal patterns in clusters of extremes of regularly varying time series

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Zu diesem Vortrag sind alle Interessierten herzlich eingeladen.

Abstract:

The purpose of this talk is to investigate temporal clusters of extremes defined as subsequent exceedances of high thresholds in a stationary time series. Two meaningful features of these clusters are the probability distribution of the cluster size and the ordinal patterns within a cluster. The latter have been introduced in order to handle data sets with several thousand data points appearing in medicine, biology, finance and computer science. Since these patterns take only the ordinal structure of consecutive data points into account, the method is robust under monotone transformations and measurement errors. We verify the existence of the corresponding limit distributions in the framework of regularly varying time series, develop non-parametric estimators and show their asymptotic normality under appropriate mixing conditions.