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von

**Prof. Dr. Martin Schlather**  
GEORG-AUGUST-UNIVERSITÄT GÖTTINGEN

## **Analysis of interactions within high-frequency financial data using marked point process theory**

While it is a well-known fact that price-volatility of a exchange-traded asset increases in times of high trading intensity, not much is known about the interactions of instances of trade and the volatility at microscopic scale of minutes. Perceiving transaction data as a marked point process, we present a novel characteristic that is able to detect interaction effects between past transaction dates and the actual price of an asset. We apply this statistic to Engle's UHF-GARCH model and propose an extension in order to make the model account for those effects of interaction that become observable when using large data sets. Our modifications are mainly motivated by the theory of microstructure noise. The analysis is based on transaction data of a 7-year period from German stock exchanges.

**Termin:** Freitag, 25. November 2011, 13:30 Uhr

**Ort:** Universität Ulm, Helmholtzstr. 22, Raum 202

Interessenten sind herzlich eingeladen.  
Der Vortrag findet im Rahmen des Gratuiertenkollegs statt.

gez. E. Spodarev