



Mathematisches Kolloquium

Am Freitag, dem 31. Oktober 2014 spricht um 14 Uhr c. t. im Hörsaal IV
der Fachrichtung Mathematik (Gebäude E2 4)

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über das Thema:

Volatility Modelling: The COGARCH and beyond

Abstract: In 1982 Engle suggested an autoregressive conditionally heteroskedastic (ARCH) model for the variance of the United Kingdom inflation in which the conditional variance was modeled as an autoregressive process of past variances. Bollerslev 1986 enriched this model by an additional term of past squared observations resulting in the generalized ARCH (GARCH) model, which is nowadays one of the most prominent econometric models as it captures relevant stylized facts of econometric data. The GARCH model was embedded into a continuous-time setting in 2004 by KlÄ¼ppelberg, Lindner and Maller. Although this so-called COGARCH model shows a similar behaviour as the GARCH and captures many properties of financial data, it also has some unwanted properties. In particular it is (as the GARCH) not able to reproduce a leverage effect. Also, as in other one-parameter models, jumps of volatility and price in the COGARCH are connected deterministically. In this talk we review the development of the COGARCH and discuss how one can improve the model by allowing some asymmetry and using superposition techniques.

Der Gast wird von Dr. Yana Kinderknecht betreut.

Alle Interessenten sind zum Vortrag herzlich eingeladen.

Kaffee und Tee ab 13.45 Uhr im Konferenzraum der Mathematik (Erdgeschoss, Raum 1.03)