Einladung zum Gastvortrag

UNIVERSITÄT DES SAARLANDES

im Rahmen des InnoLecture-Kolloquiums

Lehrstuhl für Systemtheorie und Regelungstechnik
Prof. Dr.-Ing. habil. J. Rudolph

Universität
Campus A5 1
D-66123 Saarbrücken

Tel.: +49 (0) 681 302-64721
Fax: +49 (0) 681 302-64722

www.lsr.uni-saarland.de

Am Freitag, 09.07.2010, 13.30 Uhr, spricht
in Gebäude C6.3, Hörsaal 1 (E08)

Prof. Dr. Michel Fliess

Laboratoire d`Informatique
de l`École Polytechnique, Palaiseau &
INRIA project ALIEN

zum Thema

On the existence of trends in financial time series and some of its consequences

We are settling in this joint work with C. Join (Nancy) a longstanding quarrel in quantitative finance by proving the existence of trends in financial time series thanks to a theorem due to P. Cartier and Y. Perrin, which is expressed in the language of nonstandard analysis (Integration over finite sets, F. & M. Diener (Eds): Nonstandard Analysis in Practice, Springer, 1995, pp. 195-204). Those trends, which might coexist with some altered random walk paradigm and efficient market hypothesis, seem nevertheless difficult to reconcile with the celebrated Black-Scholes model. They are estimated via recent techniques stemming from control and signal theory. Several quite convincing computer simulations on the forecast of various financial quantities are depicted. We conclude by exploring various possible applications in financial engineering and by discussing the rôle of probability theory.

Alle Interessenten sind herzlich eingeladen.

Univ.-Prof. Dr.-Ing. habil. J. Rudolph