Humboldt-Universität zu Berlin
Institut für Mathematik

Technische Universität Berlin
Institut für Mathematik

DFG-Forschungszentrum
"MATHEON"

Deutsche Bank AG
GME - QP Lab

Im Rahmen des Forschungsseminares

Stochastische Analysis und
Stochastik der Finanzmärkte

spricht außerplanmäßig

Toru Ohira

(Sony Computer Science Laboratories, Inc., Tokyo)

zu dem Thema

"Delay, Noise and Resonance: Stochasticity and Non-locality on the Time Axis "

Zeit: Montag, 09. Juni 2008, 17 Uhr c.t.

Ort: HU Berlin, Johann von Neumann - Haus, Rudower Chaussee 25, Hörsaal 1.115

Abstract: Interaction and feedback delays combined with stochasticity leads to rather unexpected physical and mathematical phenomena. I would like to introduce some aspects of these interesting features of "Delayed Stochastic Systems", with possible applications as attached in the following. Unsolved problems will be discussed. Also, I would like to ask opinions for considering "noiseänd non-locality" both on space and time axes.

1. Background
   a) Stochastic Differential Equations and Random Walks, b) Delay Differential Equations,
   c) Stochastic Resonance
2. Delayed Stochastic Systems
   a) Delayed Random Walk, b) Delayed Stochastic Resonance
3. Applications
   a) Posture Control, b) Stick Balance, c) Encryption
4. Non-locality and Stochasticity on the Time Axis
   a) Predictive Stochastic Resonance, b) Stochastic "Time"
5. Other interests: Quantum Measurement Theory, Neural Networks, Traffic, Econo-physics etc.

Interessenten sind herzlich eingeladen!

Prof. P. Bank	Prof. D. Becherer	Prof. H. Föllmer
Prof. U. Horst	Prof. P. Imkeller	Prof. U. Küchler