Einladung zum

MATHEMATISCHEN KOLLOQUIUM


spricht

Prof. Dr. Peter Kloeden

Universität Frankfurt

über

Random Attractors and the Preservation of Synchronization in the Presence of Noise

The long term behaviour of dissipatively synchronized deterministic systems is determined by the system with the averaged vector field of the original uncoupled systems. This effect is preserved in the presence of environmental i.e., background or additive noise provided stochastic stationary solutions are used instead of steady state solutions. Random dynamical systems and random attractors provide the appropriate mathematical framework for such problems and require Ito stochastic differential equations to be transformed into pathwise random ordinary differential equations.

An application to a system of semi-linear parabolic stochastic partial differential equations with additive space-time noise on the union of thin bounded tubular domains separated by a permeable membrane will be considered.

What happens with linear multiplicative noise will also be considered.

Joint work with Tomas Caraballo (Sevilla) and Igor Chueshov (Kharkov).

Based on the papers

Der Vortrag findet statt um 17 Uhr c.t. im Raum 7260, 7. Ebene des Mehrzweckhochhauses (MZH) der Universität Bremen, Bibliothekstraße.
Zuvor gibt es Kaffee/Tee und Gebäck im Raum 7140.

Alle Interessierten sind herzlich eingeladen.

Marc Keßeböhmer als Kolloquiumsbeauftragter.