Einladung zum
Mathematischen Kolloquium

Julius-Maximilians-Universität Würzburg ● Fakultät für Mathematik und Informatik

Prof. Dr. Maria Westdickenberg

RWTH Aachen

Order and disorder: The competition between energy and entropy in randomly perturbed systems

Donnerstag, den 13. Dez. 2012 ● 16:15 Uhr
Mathematik Ost (Emil-Fischer-Straße 40), Seminarraum SE40 (Raum 00.001)

Inhaltsangabe

Although at first glance a stochastic perturbation destroys the stability of energy minimizers, the probabilistic theory of large deviation reveals that the *most likely* pathways actually solve their own minimization problem. This theory—established in the mathematical literature decades ago with the classic book of Freidlin and Wentzell—treats stochastic ordinary differential equations. Subsequently, it was confirmed that the theory generalizes naturally to stochastic partial differential equations. Recently, there has been progress in pushing large deviation theory to the limit and probing new regimes. In this talk, we will be particularly interested in the competition between energy and entropy that emerges in the case of small noise and large system size. We will present some recent results and give a feeling for the underlying tools.

The talk is intended for a broad audience and no prior knowledge of probability theory will be assumed.

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www.mathematik.uni-wuerzburg.de/kolloquium.html

Zu diesem Vortrag laden wir Sie herzlich ein.
Im Anschluss an die Vorträge Kaffee und Tee im Foyer vor dem SE40.

Die Dozentinnen und Dozenten der Mathematik