CARL VON OSSIETZKY universität OLDENBURG
FAKULTÄT V
MATHEMATIK UND NATURWISSENSCHAFTEN

Institut für Physik

Theoriekolloquium

Am **26. Januar 2017** um **14.15 Uhr** in **W2 1-143** hält

Frau Prof. Dr. Hildegard Meyer-Ortmanns (Bremen)

einen Vortrag mit dem Titel

On the Role of Frustration in Dynamical Systems

In the context of physics the notion of frustration is familiar from spin systems. There it can lead to the degeneracy of the ground state or the roughening of the energy landscape. We define a notion of frustration in oscillatory and excitable systems and analyze the impact of frustrated couplings at the examples of classical oscillators and excitable systems. In partial analogy to spin systems we observe an enrichment of the attractor landscape, versatile multistability, physical aging and order-by-disorder effects under the action of noise. In particular we compare the impact of noise with other sources of disorder on the exploration of phase space. We indicate further applications of the concept of frustration to other fields of research, based on the fact that a necessary ingredient for frustration is the presence of antagonistic couplings, which are frequently found in dynamical systems.

Interessierte sind herzlich eingeladen.

gez. Prof. Dr. Alexander Hartmann