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OBERSEMINAR IM INSTITUT FÜR ANGEWANDTE ANALYSIS

Wintersemester 2025/26

Im Rahmen des Oberseminars spricht am Montag, den **12. Januar 2026**:

LOUIS CARILLO
CERMICS

Entropic metastability in the narrow escape problem

The narrow escape problem is a prototypical example to study entropic metastability, inspired by concrete applications in biology and chemistry. The problem is the determination of the exit time and position of a Brownian particle trapped in a domain with narrow holes. Unlike the usual double well potential, this form of metastability is not of energetic form as there is no potential involved, hence no Eyring-Kramers formula. Our goal is to study this problem in any dimension for arbitrary shapes of hole, and thanks to the quasi-stationary distribution approach to metastability, to rigorously derive the counterpart Eyring-Kramers type formulas in this context. Our numerical predictions are illustrated by numerical simulations, both Monte Carlo like and deterministic ones based on solving appropriate partial differential equations.

Der Vortrag findet in **Raum E.60, Helmholtzstr. 18** statt.

Beginn: 17 Uhr (s.t.). Alle Interessierten sind herzlich eingeladen.

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