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OBERSEMINAR IM INSTITUT FÜR ANGEWANDTE ANALYSIS

Sommersemester 2025

Im Rahmen des Oberseminars spricht am Montag, den **30. Juni 2025**:

URBAIN VAES

Inria Paris

Mathematical analysis of the narrow escape problem

The narrow escape problem concerns the behavior of Brownian particles confined within a bounded domain whose boundary is mostly reflecting, except for a few small absorbing windows. A key question is to characterize the asymptotic behavior of the escape time and the distribution of the exit location as the size of these windows tends to zero. This problem naturally leads to studying elliptic partial differential equations with mixed boundary conditions, where the solution exhibits singular behavior near the small absorbing regions. In this talk, we present new asymptotic results for the exit time and exit position in arbitrary geometries and in any spatial dimension, generalizing previous results.

Joint work with L. Carillo, T. Lelièvre, T. Normand, G. Stoltz

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

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

W. Arendt, A. Dall'Acqua, A. Schlichting, R. Zacher.