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Einladung
zum
Oberseminar Stochastik

Am Donnerstag, 14. Juni 2018, um **14:00 Uhr**, im Seminarraum 2 des
Mathematischen Instituts (Raum 204), Weyertal 86-90, 50931 Köln spricht:

Franziska Flegel
(Weierstraß Institut Berlin)

zum Thema

Spectral localization vs. homogenization in the random conductance model

"We study the asymptotic behavior of the top eigenvectors and eigenvalues of the random
conductance Laplacian in a large domain of $\mathbb{Z}^d$ ($d \geq 2$) with zero Dirichlet conditions. Let
the conductances w be positive i.i.d. random variables, which fulfill certain regularity as-
sumptions near zero. Then we show that the spectrum of the Laplacian displays a sharp
transition between a completely localized and a completely homogenized phase. A simple
moment condition distinguishes between the two phases.
In the homogenized phase we can even generalize our results to stationary and ergodic
conductances with additional jumps of arbitrary length. Here, our proofs are based on a
compactness result for the Laplacian's Dirichlet energy, Poincaré inequalities, Moser itera-
tion and two-scale convergence. The investigation of the homogenized phase is joint work
with M. Slowik and M. Heida."

Alle Interessenten sind herzlich eingeladen.
Die Dozenten der Stochastik