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# Einladung zum
# Oberseminar Stochastik

Am Donnerstag, 30. November 2017, 14.00 Uhr, Seminarraum 2 (Raum 204)
des Mathematischen Instituts, Weyertal 86-90, 50931 Köln

spricht

**Peter Gracar**
**(Universität zu Köln)**

zum Thema:

**Spread of infection by random walks - Multi-scale percolation along a
Lipschitz surface**

**Abstract**: A conductance graph on $\mathbb{Z}^d$ is a nearest-neighbor graph where all of the
edges have positive weights assigned to them. We will first consider a point process
of particles on the nearest neighbour graph $(\mathbb{Z}^d, E)$ and show some known results
about the spread of infection between particles performing continuous time simple
random walks. Next, we extend consider the case of uniformly elliptic random graphs
on $\mathbb{Z}^d$ and show that the infection spreads with positive speed also in this more
general case. We show this by developing a general multi-scale percolation argument
using a two-sided Lipschitz surface that can also be used to answer other questions
of this nature. Joint work with Alexandre Stauffer.

Alle Interessenten sind herzlich eingeladen.

Die Dozenten der Stochastik