# Einladung zum Vortrag

von

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## Rare-Event Simulation for Spatial Stochastic Models

Stochastic models are important tools for our understanding of complex systems, for example telecommunication networks. In applications it is often important to calculate the probability $p$ of the occurrence of some event. When this event is rare (for example $p < 10^{-5}$) crude simulation can fail to give an estimate to the desired accuracy in a reasonable amount of simulation time. In these cases more sophisticated methods are needed. The splitting method is one of the two major methods used in rare event simulation, the other being importance sampling. With the collection of larger, more complicated data sets it is anticipated that similar estimation problems will occur in the analysis of spatial stochastic models. When the spatial process of interest has spatial dependency that extends for only a finite distance and the event of interest has a simple form, the splitting method can be applied very successfully. The situation where spatial dependency extends for an unlimited distance is more difficult. However our application of the splitting method to a percolation problem indicates that with some creativity the splitting method can be applied in this situation too.

**Termin: Dienstag, 12. November 2013, 12:30 Uhr**

**Ort:     Universität Ulm,  Hörsaal 7 in O25**

Interessenten sind herzlich eingeladen.

Der Vortrag findet im Rahmen unseres Forschungsseminars statt

gez. V. Schmidt