



## Mathematisches Kolloquium

# Generalized couplings and stability of Markov chains

**Sprecher: Prof. Alexei Kulik**

Eingeladen von Prof. Evgeny Spodarev

**03.02.2017 | 14:30 Uhr | R220 HeHo 18**

The talk will be devoted to the notion of "generalized coupling" which is a natural extension of "coupling", the latter being a classical tool for proving asymptotic stabilization of transition probabilities of Markov chains. Generalized couplings are well-suited to handle realistic Markov models with complicated state spaces, e.g. those described by stochastic delay equations and stochastic PDEs (two examples which will be discussed in the talk). The crux of a usual "coupling" approach, the construction of the required coupling, is drastically simplified in the "generalized coupling" framework, which makes the method very efficient.

The talk is based on a joint work with Michael Scheutzow (TU Berlin).