Institut für Mathematik
Bereich Stochastik
Prof. Dr. P. Imkeller

September 2015

In the **second half** of the winter term 2015/16 I will teach the lecture course entitled

Ergodic theory and stochastic dynamics

Topics: The course will aim at a development of the theory of the asymptotic exponential growth rate of dynamical systems subject to random noice, comprised in the concepts of Lyapunov exponents and Oseledets' multiplicative ergodic theorem. We start by discussing stationary Markov chains and their asymptotic properties. Via the classical ergodic theorem by Birkhoff we will treat the subadditive ergodic theorem by Kingman. This will finally lead us to Oseledets' multiplicative ergodic theorem and the representation of Lyapunov exponents.

Prerequisites: elements of *Stochastic processes (Stochastik II); stochastic analysis*

Time and place:

Lectures and Tutorials:	Monday,	11 – 13 h,	Rudower Chaussee 26, room: 1'304
		13 – 15 h,	Rudower Chaussee 26, room: 1'304
	Wednesday,	09 – 11 h,	Rudower Chaussee 26, room: 1'304

First Lecture: ***tba***

Literature: to be discussed during the course.

Office hours: by arrangement; Rudower Chaussee 25, room: 1.218

gez. Prof. Dr. P. Imkeller