



Wir laden recht herzlich zu einem Vortrag im Rahmen des

Oberseminars Partielle Differentialgleichungen

ein:

Dr. Björn Augner

(Technische Universität Darmstadt)

*“Fast Limit Models of Bulk-Surface Reaction-Diffusion-Sorption
Systems”*

Mittwoch, 17. Juli 2019

Beginn: **13:30 Uhr**

Raum: **P812**

Interessenten sind herzlich willkommen!

R. Denk, M. Kunze

Abstract: Reaction-diffusion systems with coupling between a bulk phase (chemical reactor) and its surface (heterogeneous catalysator) play an important role in chemical engineering, and constitute an interesting and challenging topic for mathematical analysis. The dynamics of such heterogeneous catalysis systems are governed by several chemical-physical processes in the bulk and on the surface. Typically, these processes take place on different time scales, e.g. fast chemical reactions on the surface. In this talk, we address several classes of PDE and PDE-ODE systems arising from different formal limits. For a particular model case, we outline the mathematical analysis, e.g. local-in-time well-posedness, regularity theory, positive invariance and global-in-time existence of solutions.
