ALPEN-ADRIA UNIVERSITÄT KLAGENFURT

# Invitation to the Doctoral Seminar

**Florian Schilberth**
University of Klagenfurt

**"A model for the control of a randomly perturbed coefficient in an elliptic PDE"**

N.2.35 Wednesday, 24 June 2026 10:45 a.m.

## Abstract

The talk is concerned with the optimization of a deterministic coefficient function in the left hand side of an elliptic PDE. These coefficients represent the conductivity in the domain, and the corresponding solution can be interpreted as an electrical potential or a temperature. The optimal coefficient should steer the temperature distribution close to a desired state, in a way that is robust against random perturbations. The deterministic optimal control problem without perturbations is well-understood for different choices of admissible sets. In the most general setting studied, techniques from the theory of homogenization are used and the main goal is to adapt these techniques to solve the stochastic problem.

Caroline Geiersbach and the Department of Mathematics look forward to seeing you at the talk!