

# Optimal Dirichlet Boundary Control Problems with Uncertain Data

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In this talk we study optimal Dirichlet boundary control problems where the diffusion coefficient, the source term and the boundary data in the state equation are uncertain. Existence of solutions and necessary optimality conditions are derived.

As solution algorithm we propose a stochastic Galerkin discretization. Special emphasis is put on preconditioning of the resulting linear systems and error estimates for the stochastic Galerkin discretization. Furthermore, we confirm the theoretical findings by numerical experiments.

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