



Im Rahmen des Kolloquiums des
Graduiertenkollegs Algorithmic Optimization
findet am

Montag, dem 6. Mai 2019
16 Uhr c.t.
Hörsaal 9

folgender Vortrag statt:

Optimal control of a non-smooth semi-linear elliptic equation

Prof. Dr. Christian Meyer
TU Dortmund

Abstract:

The talk is concerned with an optimal control problem governed by a non-smooth semilinear elliptic equation. It is shown that the control-to-state mapping is directionally differentiable and we precisely characterize its Bouligand subdifferential. By means of a suitable regularization, first-order optimality conditions including an adjoint equation are derived and afterwards interpreted in light of the previously obtained characterization. In addition, the directional derivative of the control-to-state mapping is used to establish strong stationarity conditions. While the latter conditions are shown to be stronger, numerical examples demonstrate that the former conditions are amenable to numerical solution using a semi-smooth Newton method.

Gastgeber:

Prof. Dr. Volker Schulz
Kolloquiums Kaffee ab 15:45 Uhr im Raum E 10