

Lothar-Collatz-Seminar

Wed, 06. Jul · 4:15 pm · Geom 241

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Control in the Coefficients of an Obstacle problem

Abstract:

In this talk, we consider an optimal control problem governed by an obstacle problem. The novelty and focus of the talk will be the introduction of a control variable into the coefficients of this optimal control problem.

In particular, we discuss the effects of multiplicatively coupling control and state, which prevents us from using standard results dependent on weak convergence. Utilizing H-convergence instead, we can prove the existence of a solution to the problem. We will then present a regularization approach to circumvent the nondifferentiability of the solution operator inherent to obstacle problems and discuss how a sequence of regularized problems can be used to compute optimality conditions for this type of problem with control in the coefficients.

For further information please contact

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www.c3s.uni-hamburg.de/news-events/seminar-c3s.html