

Coefficient Control for Variational Inequalities

Wednesday, August 14, 2024 12:00 PM (30 minutes)

In this talk, we consider the introduction of a control variable into the coefficients of the variational inequality constraint of an optimal control problem. To this effect, we discuss optimality conditions for a problem governed by an obstacle problem with control in the coefficients. Since the obstacle problem acts as a complementarity constraint, it is known, that standard constraint qualifications do not apply. Further, we will utilize a regularization approach to address the lack of Gateaux differentiability inherent to the obstacle problem. The novelty of this talk will be the use of H-convergence techniques in conjunction with such a regularization approach to discuss optimality conditions for a problem subject to, coefficient controlled, variational inequality constraints.

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