

27th IFIP TC7 Conference 2015 on System Modelling and Optimization

Optimization and Control of Nonsmooth and Complementarity-Based Systems: Theory and Numerics

Strong stationarity for MPCCs in Banach spaces

Gerd Wachsmuth

Faculty of Mathematics, TU Chemnitz

gerd.wachsmuth@mathematik.tu-chemnitz.de

Abstract: In this talk we consider a general mathematical program with complementarity constraints (MPCC) in a Banach space. Examples of such optimization problems include finite dimensional MPCCs, problems with semidefinite cone complementarity constraints and optimal control of the obstacle problem. The main concern is the definition and verification of optimality conditions of strong stationarity type. For problems with semidefinite cone complementarity constraints we obtain the new result that a variant of (MPCC)-LICQ implies strong stationarity.