

Gastvortrag

Donnerstag, 8. Februar 2018
11.00 Uhr
Seminarraum II

Prof. Dr. Andreas Fischer
Technische Universität Dresden

The LP-Newton Method and Recent Developments

Abstract:

The LP-Newton method was designed for systems of nonlinear equations possibly having nonisolated and degenerate solutions. Such systems arise from Karush-Kuhn-Tucker conditions for optimization problems, variational inequalities, or generalized Nash equilibrium problems. Under mild conditions, the subproblems of the LP-Newton method become linear programs. Appropriate assumptions guarantee that the LP-Newton method converges locally with quadratic rate even for cases with nonisolated and degenerate solutions. Besides some basic results, we will highlight the role of error bounds and present applications to piecewise smooth systems and generalized Nash equilibrium problems. Moreover, we will detail ideas for the globalization of the LP-Newton method.

Einladender: Andreas Schröder