Semismooth Newton Methods for a Class of State Constrained Optimal Control Problems

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A class of mixed control and state constrained optimal control problems with regular Lagrange multipliers is considered. The governing partial differential equation is of elliptic type. A particular realization of a semismooth Newton method for the numerical solution is introduced, and it is shown that it converges locally at a superlinear rate. The talk ends by a report on numerical tests.

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