Dual approach for a class of implicit convex optimization problems

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Abstract

The problem of finding a solution to a system of variational inequalities, which can be interpreted as a generalization of a convex optimization problem under arbitrary right-hand side constraint perturbations, is considered. We suggest this problem to be converted into a mixed variational inequality formulation of optimality conditions for a nonconvex and nonsmooth optimization problem. The latter problem can be solved by splitting type methods. Additional examples of applications to certain equilibrium type problems are also given. © Springer-Verlag 2004.

Keywords

Arbitrary perturbations, Implicit convex optimization, Splitting method