

One step from DC optimization to DC mixed variational inequalities

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Abstract: We apply the proximal point method to mixed variational inequalities by using DC decompositions of the cost function. An estimation for the iterative sequence is given and then applied to prove the convergence of the obtained sequence to a stationary point. Linear convergence rate is achieved when the cost function is strongly convex. For nonconvex case, global algorithms are proposed to search a global equilibrium point. A Cournot-Nash oligopolistic market model with concave cost function which motivates our consideration is presented. © 2010 Taylor & Francis.

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