Properties of predictor-corrector algorithms for variational inequalities

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Variational inequalities arise in many applications in the physical sciences and engineering, often in the context of weak or variational formulations of problems posed on convex sets rather than on subspaces of functions, and of problems involving differential inclusions rather than equations. The aim of this talk is to examine a class of predictor-corrector algorithms for the solution of the latter family of variational inequalities. These algorithms have been widely used, yet only partial results on their properties are available. Some new results on convergence will be presented, and illustrated in the context of a model problem.