Explicit Iteration Methods for Solving Variational Inequalities in Banach Spaces

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Abstract: The problem of finding a solution of a variational inequality over the set of common fixed points of a nonexpansive semigroup is considered in a real and uniformly convex Banach space without imposing the sequential weak continuity of the normalized duality mapping. Two new explicit iterative methods are introduced based on the steepest-descent method and conditions are given to obtain their strong convergence. A numerical example is showed to illustrate the convergence analysis of the proposed methods.

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