

A COMPUTATIONAL ROLE OF PARTIALLY RELAXED MONOTONE MAPPINGS IN APPROXIMATION SOLVABILITY OF NONLINEAR VARIATIONAL INEQUALITIES

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Abstract. A computational role of a class of partially relaxed monotone mappings in the approximation-solvability of a class of nonlinear variational inequalities based on a variational inequality type algorithm is presented. We consider a class of nonlinear variational inequality (abbreviated as NVI) problems: find an element $x^* \in K$ such that

$$\langle T(x^*), x - x^* \rangle \geq 0 \text{ for all } x \in K,$$

where $T : K \rightarrow H$ is a γ -r-partially relaxed monotone mapping and K a closed convex subset of a real Hilbert space H .

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