ALGORITHMS CONSTRUCTION FOR
NONEXPANSIVE MAPPINGS AND
INVERSE-STRONGLY MONOTONE MAPPINGS

Yao, YH; Liou, YC; Chen, CP

Addresses:
1. Natl Sun Yat Sen Univ, Dept Comp Sci & Engn, Kaohsiung 80424, Taiwan
2. Tianjin Polytech Univ, Dept Math, Tianjin 300160, Peoples R China
3. Cheng Shiu Univ, Dept Informat Management, Kaohsiung 833, Taiwan

Abstract: In this paper, we construct two algorithms for finding a common element of the set of fixed points of a nonexpansive mapping and the set of solutions of the variational inequality for an alpha-inverse-strongly monotone mapping in a Hilbert space. We show that the sequence converges strongly to a common element of two sets under the some mild conditions on parameters. As special cases of the above two algorithms, we obtain two schemes which both converge strongly to the minimum norm element of the set of fixed points of a nonexpansive mapping and the set of solutions of the variational inequality for an a-inverse-strongly monotone mapping.

KeyWords Plus: VISCOSITY APPROXIMATION METHODS; STRONG-CONVERGENCE THEOREMS; VARIATIONAL-INEQUALITIES; FIXED-POINTS; BANACH-SPACES; WEAK-CONVERGENCE; HILBERT-SPACES; OPERATORS; ITERATION

Reprint Address: Chen, CP (reprint author), Natl Sun Yat Sen Univ, Dept Comp Sci & Engn, Kaohsiung 80424, Taiwan.

Full Text