THE SHRINKING PROJECTION METHOD
FOR A FINITE FAMILY OF DEMIMETRIC MAPPINGS
WITH VARIATIONAL INEQUALITY PROBLEMS
IN A HILBERT SPACE

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Abstract. In this paper, using a new nonlinear mapping called demimetric and the shrinking projection method, we prove a strong convergence theorem for finding a common element of the set of common fixed points for a finite family of these new demimetric mappings and the set of common solutions of variational inequality problems for a finite family of inverse strongly monotone mappings in a Hilbert space. Using the result, we obtain well-known and new strong convergence theorems in a Hilbert space.

Key Words and Phrases: Fixed point, demimetric mapping, inverse strongly monotone mapping, shrinking projection method, variational inequality problem.

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