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Convergence analysis of parallel S-iteration process for system of generalized variational inequalities. (English) Zbl 1377.49010

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Summary: We consider a new System of Generalized Variational Inequalities (SGVI) defined on two closed convex subsets of a real Hilbert space. To find the solution of considered SGVI, a parallel Mann iteration process and a parallel S-iteration process have been proposed and the strong convergence of the sequences generated by these parallel iteration processes is discussed. Numerical example illustrates that the proposed parallel S-iteration process has an advantage over parallel Mann iteration process in computing altering points of some mappings.

MSC:

49J40 Variational inequalities
47J25 Iterative procedures involving nonlinear operators

Keywords:

generalized variational inequalities; parallel S-iteration process

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