Hieu, Dang Van
Parallel and cyclic hybrid subgradient extragradient methods for variational inequalities. (English) Zbl 1375.65093 Afr. Mat. 28, No. 5-6, 677-692 (2017).

The author proposes two hybrid subgradient extragradient methods for solving common solutions of variational inequalities problems (CSVIP). The first is a parallel algorithm which can be performed simultaneously while the second is a cyclic algorithm which is computed sequentially on each subproblem in the family. The novelty of this paper is that we have designed the algorithms to develop possible practical numerical methods when the number of subproblems is large. The algorithms can be considered as improvements of some previously known results for CSVIPs. Numerical experiments are also performed to illustrate the efficiency of the proposed algorithms.

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MSC: 65K15 Numerical methods for variational inequalities and related problems 65Y05 Parallel numerical computation 49J40 Variational inequalities

Keywords: hybrid method; subgradient extragradient method; parallel algorithm; cyclic algorithm; variational inequality; numerical experiment

Full Text: DOI

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