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An Inexact Penalty Method for Non Stationary Generalized Variational Inequalities

Konnov I.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© 2014, Springer Science+Business Media Dordrecht. We consider a set-valued (generalized) variational inequality problem in a finite-dimensional setting, where only approximation sequences are known instead of exact values of the cost mapping and feasible set. We suggest to apply a sequence of inexact solutions of auxiliary problems involving general penalty functions. Its convergence is attained without concordance of penalty, accuracy, and approximation parameters under certain coercivity type conditions.

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Keywords

Approximate solutions, Coercivity conditions, Non-monotone mappings, Non-stationarity, Penalty method, Set-valued mappings, Variational inequality