On surjectivity of some classes of generalized monotone operators

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Abstract

We present results for the existence of solutions for variational inequalities given by generalized monotone operators. As a consequence we establish surjectivity, and we obtain, in particular, results for the existence of zeroes of some class of set-valued operators. Furthermore, by strengthening the continuity assumption on the operator, we deduce its surjectivity without any monotonicity assumption. In the framework of reflexive Banach spaces, we extend a similar result due to Inoan and Kolumbán (Nonlinear Analysis, 68(2008), pp. 47-53).