

Ann. Funct. Anal. 2 (2011), no. 2, 51–58

 \mathscr{A} NNALS OF \mathscr{F} UNCTIONAL \mathscr{A} NALYSIS

ISSN: 2008-8752 (electronic)

URL: www.emis.de/journals/AFA/

SOME EXISTENCE RESULTS ON A CLASS OF INCLUSIONS

ZORAN D. MITROVIĆ

Communicated by G. L. Acedo

ABSTRACT. In this paper, we introduce the generalized system nonlinear variational inclusions and prove the existence of its solution in normed spaces. We provide examples of applications related to a system nonlinear variational inclusions in the sense of Verma, a coupled fixed point problem, considered by Bhaskar and Lakshmikantham, a coupled coincidence point considered by Lakshmikantham and Ćirić. Also, we generalized coupled best approximations theorem.

FACULTY OF ELECTRICAL ENGINEERING, UNIVERSITY OF BANJA LUKA, 78000 BANJA LUKA, PATRE 5, BOSNIA AND HERZEGOVINA.

E-mail address: zmitrovic@etfbl.net

Date: Received: 30 May 2011; Accepted: 26 July 2011.

²⁰¹⁰ Mathematics Subject Classification. Primary 47H10; Secondary 47H04.

Key words and phrases. Variational inclusions, Coupled fixed point, Coupled coincidence point, KKM mapping.