EXISTENCE OF THREE ANTI-PERIODIC SOLUTIONS FOR SECOND-ORDER IMPULSIVE DIFFERENTIAL INCLUSIONS WITH TWO PARAMETERS

S. HEIDARKHANI

Department of Mathematics
Faculty of Sciences, Razi University
67149 Kermanshah, Iran
and
School of Mathematics
Institute for Research in Fundamental Sciences (IPM)
P.O. Box: 19395-5746, Tehran, Iran
e-mail: s.heidarkhani@razi.ac.ir

G.A. AFROUZI

Department of Mathematics
Faculty of Mathematical Sciences
University of Mazandaran, Babolsar, Iran
e-mail: afrouzi@umz.ac.ir

AND

A. HADJIAN

Department of Mathematics
Faculty of Mathematical Sciences
University of Mazandaran, Babolsar, Iran
e-mail: a.hadjian@umz.ac.ir

Abstract

Applying two three critical points theorems, we prove the existence of at least three anti-periodic solutions for a second-order impulsive differential inclusion with a perturbed nonlinearity and two parameters.

Keywords: differential inclusion, impulsive, anti-periodic solution, non-smooth critical point theory.

2010 Mathematics Subject Classification: 58E05, 49J52, 34A60.
References


Received 19 February 2013