

THE SET OF SOLUTIONS TO A NONLINEAR INTEGRODIFFERENTIAL EQUATION IN N VARIABLES

LE THI PHUONG NGOC*, HUYNH THI HOANG DUNG**,*** AND NGUYEN THANH
LONG***

*University of Khanh Hoa, 01 Nguyen Chanh Str., Nha Trang City, Vietnam
E-mail: ngoc1966@gmail.com

**Department of Basic Sciences, University of Architecture Ho Chi Minh City,
196 Pasteur Str., Dist. 3, Ho Chi Minh City, Vietnam
E-mail: dughth1980@gmail.com

***Department of Mathematics and Computer Science, University of Science
Vietnam National University Ho Chi Minh City, 227 Nguyen Van Cu Str., Dist. 5
Ho Chi Minh City, Vietnam
E-mail: longnt2@gmail.com

Abstract. In this paper, we study the existence and the compactness of the set of solutions for a nonlinear integrodifferential equation in N variables. The main tools are the fixed point theorem of Krasnosel'skii with the definition of a suitable Banach space and a sufficient condition for relative compactness of subsets in this space. An illustrative example is given.

Key Words and Phrases: Nonlinear integrodifferential equation, the fixed point theorem of Krasnosel'skii.

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