MÖNCH SETS AND FIXED POINT THEOREMS FOR MULTIMAPS IN LOCALLY CONVEX TOPOLOGICAL VECTOR SPACES

T. CARDINALI*, D. O’REGAN** AND P. RUBBIONI*

*Department of Mathematics and Computer Sciences
University of Perugia, Perugia, ITALY
E-mail: tiziana.cardinali@unipg.it, paola.rubbioni@unipg.it

**School of Mathematics, Statistics and Applied Mathematics,
National University of Ireland, Galway, Ireland
E-mail: donal.oregan@nuigalway.ie

Abstract. We present a variety of fixed point theorems for multimaps having weakly closed graph. We state in turn Sadovskii, Mönch and Daher type theorems which improve recent results in the literature. With this in mind, we introduce the definition of Mönch-set.

Key Words and Phrases: Mönch-set, condensing multimap, fixed point theorem, measure of noncompactness, weakly closed graph.

2010 Mathematics Subject Classification: 47H10, 47H08, 47H04.

Acknowledgements. The first and third authors have been supported by the Gruppo Nazionale per l’Analisi Matematica, la Probabilità e le loro Applicazioni (GNAMPA) of the Istituto Nazionale di Alta Matematica (INdAM) and by the National Research Project GNAMPA 2015 Metodi Topologici, sistemi dinamici e applicazioni.

REFERENCES


Received: June 4, 2015; Accepted: December 4, 2015.