Fixed point theorems for multivalued generalized contractions of rational type in complete metric spaces

ANCA M. OPREA

ABSTRACT.

The purpose of this paper is to present some fixed point theorems for multivalued contractions of rational type. We extend the results of I. Cabrera, J. Harjani and K. Sadarangan, *A fixed point theorem for contractions of rational type in partially ordered metric spaces*, Annali dellUniversita di Ferrara, DOI 10.1007/s11565-013-0176-x, to the case of multivalued operators.

REFERENCES

[1] Cabrera, I., Harjani, J. and Sadarangani, K., *A fixed point theorem for contractions of rational type in partially ordered metric spaces*, Annali dell'Universita di Ferrara, DOI 10.1007/s11565-013-0176-x

[2] Hu, S. and Papageorgiou, N. S., *Handbook of Multivalued Analysis, Vol. I and II*, Kluwer Acad. Publ., Dordrecht, 1997 and 1999

[3] Petruşel, A., *Multivalued weakly Picard operators and applications*, Sci. Math. Jpn. **59** (2004), 169–202

[4] Petruşel, A. and Rus, I. A., *The theory of a metric fixed point theorem for multivalued operators*, Fixed Point Theory and its Applications, Yokohama Publ., Yokohama 2010, 161–175

[5] Petruşel, A. and Rus, I. A., *The theory of a metric fixed point theorem for multivalued operators*, Fixed Point Theory and its Applications, Yokohama Publ., Yokohama 2010, 161–175

[6] Rus, I. A., Petruşel, A. and Sîntămărian, A., *Data dependence of the fixed point set of some multivalued weakly Picard operators*, Nonlinear Anal., **52** (2003), 1947–1959

[7] Rus, I. A., *Picard operators and applications*, Sci. Math. Jpn., **58** (2003), 191–219

DEPARTMENT OF MATHEMATICS
BABEŞ-BOLYAI UNIVERSITY CLUJ-NAPOCA
KOGĂLNICEANU 1, 400084 CLUJ-NAPOCA, ROMANIA
E-mail address: `anca.oprea@math.ubbcluj.ro`