Fixed Point Theory, 13(2012), No. 1, 173-178 http://www.math.ubbcluj.ro/~nodeacj/sfptcj.html

FIXED POINT OF MULTIVALUED OPERATORS ON ORDERED GENERALIZED METRIC SPACES

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Abstract. Recently, Bucur, Guran and Petruşel presented some results on fixed point of multivalued operators on generalized metric spaces which extended some old fixed point theorems to the multivalued case ([1]). In this paper, we shall give some results on fixed points of multivalued operators on ordered generalized metric spaces by providing different conditions in respect to [1]. **Key Words and Phrases:** Fixed point, multivalued operator, ordered generalized metric spaces. **2010 Mathematics Subject Classification:** 47H10, 54H25.

Acknowledgments. The authors express their gratitude to the referees for their helpful suggestions which improved final version of this paper.

References

- A. Bucur, L. Guran, A. Petruşel, Fixed points for multivalued operators on a set endowed with vector-valued metrics and applications, Fixed Point Theory, 10(2009), no. 1, 19-34.
- S. Czerwik, A fixed point theorem for a system of multivalued transformations, Proc. Amer. Math. Soc., 55(1976), 136–139.
- [3] D. O'Regan, N. Shahzad, R.P. Agarwal, Fixed point theory for generalized contractive maps on spaces with vector-valued metrics, Fixed Point Theory and Appl., (Eds. Y. J. Cho, J. K. Kim, S. M. Kang), Vol. 6, Nova Science Publ., New York, 2007, 143-149.
- [4] A. Petruşel, I.A. Rus, Fixed point theory for multivalued operators on a set with two metrics, Fixed Point Theory, 8(2007), no. 1, 97–104.
- [5] I.A. Rus, Principles and Applications of Fixed Point Theory, (in Romanian), Editura Dacia, Cluj-Napoca, 1979.
- [6] I.A. Rus, The theory of a metrical fixed point theory; theoretical and applicative relevances, Fixed Point Theory, 9(2008), no. 2, 541-559.
- [7] I.A. Rus, A. Petruşel, A. Sântamărian, Data dependence of the fixed point set of multivalued weakly Picard operators, Nonlinear Analysis, 52(2003), 1947-1959.
- [8] I.A. Rus, A. Petruşel, M.A. Şerban, Weakly Picard operators; equivalent definitions, applications and open problems, Fixed Point Theory, 7(2006), no. 1, 3-22.

Received: April 29, 2010; Accepted: May 30, 2011.

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