

Asl, J. Hasanzade; Rezapour, S.; Shahzad, N.

On fixed points of α - ψ -contractive multifunctions. (English) Zbl 1293.54017

Fixed Point Theory Appl. 2012, Paper No. 212, 6 p. (2012).

Summary: Recently, *B. Samet* et al. [Nonlinear Anal., Theory Methods Appl., Ser. A, Theory Methods 75, No. 4, 2154–2165 (2012; [Zbl 1242.54027](#))] introduced the notion of α - ψ -contractive type mappings and established some fixed point theorems in complete metric spaces. In this paper, we introduce the notion of α_* - ψ -contractive multifunctions and give a fixed point result for these multifunctions. We also obtain a fixed point result for self-maps in complete metric spaces satisfying a contractive condition.

MSC:

[54H25](#) Fixed-point and coincidence theorems (topological aspects)
[54C60](#) Set-valued maps in general topology
[54E40](#) Special maps on metric spaces
[54E50](#) Complete metric spaces

Cited in **7** Reviews
Cited in **72** Documents

Keywords:

α_* - ψ -contractive multifunction; fixed point; partial metric

Full Text: [DOI](#)

References:

- [1] Abbas, M; Nazir, T; Radenovic, S, Common fixed points of four maps in partially ordered metric spaces, Appl. Math. Lett, 24, 1520-1526, (2011) · [Zbl 1220.54018](#)
- [2] Aleomraninejad, SMA; Rezapour, S; Shahzad, N, On generalizations of the suzuki's method, Appl. Math. Lett, 24, 1037-1040, (2011) · [Zbl 1290.54024](#)
- [3] Aleomraninejad, SMA; Rezapour, S; Shahzad, N, Fixed points of hemi-convex multifunctions, Topol. Methods Nonlinear Anal, 37, 383-389, (2011) · [Zbl 05976873](#)
- [4] Aleomraninejad, SMA; Rezapour, S; Shahzad, N, Some fixed point results on a metric space with a graph, Topol. Appl, 159, 659-663, (2012) · [Zbl 1237.54042](#)
- [5] Alghamdi, MA; Alnafe'i, SH; Radenovic, S; Shahzad, N, Fixed point theorems for convex contraction mappings on cone metric spaces, Math. Comput. Model, 54, 2020-2026, (2011) · [Zbl 1235.54021](#)
- [6] Altun, I; Damjanovic, B; Djoric, D, Fixed point and common fixed point theorems on ordered cone metric spaces, Appl. Math. Lett, 23, 310-316, (2010) · [Zbl 1197.54052](#)
- [7] Aydi, H; Damjanovic, B; Samet, B; Shatanawi, W, Coupled fixed point theorems for nonlinear contractions in partially ordered \mathcal{G} -metric spaces, Math. Comput. Model, 54, 2443-2450, (2011) · [Zbl 1237.54043](#)
- [8] Aydi, H; Nashine, HK; Samet, B; Yazidi, H, Coincidence and common fixed point results in partially ordered cone metric spaces and applications to integral equations, Nonlinear Anal, 74, 6814-6825, (2011) · [Zbl 1226.54043](#)
- [9] Berinde, V, Generalized coupled fixed point theorems for mixed monotone mappings in partially ordered metric spaces, Nonlinear Anal, 74, 7347-7355, (2011) · [Zbl 1235.54024](#)
- [10] Berinde, V; Borcut, M, Tripled fixed point theorems for contractive type mappings in partially ordered metric spaces, Nonlinear Anal, 74, 4889-4897, (2011) · [Zbl 1225.54014](#)
- [11] Berinde, V; Vetro, F, Common fixed points of mappings satisfying implicit contractive conditions, No. 2012, (2012) · [Zbl 1273.54044](#)
- [12] Borcut, M; Berinde, V, Tripled coincidence theorems for contractive type mappings in partially ordered metric spaces, (2012) · [Zbl 1244.54086](#)
- [13] Derafshpour, M; Rezapour, S; Shahzad, N, Best proximity points of cyclic \mathcal{G} -contractions in ordered metric spaces, Topol. Methods Nonlinear Anal, 37, 193-202, (2011) · [Zbl 1227.54046](#)
- [14] Di Bari, C; Vetro, P, Fixed points for weak \mathcal{G} -contractions on partial metric spaces, Int. J. Eng. Contemp. Math. Sci, 1, 4-9, (2011)
- [15] Di Bari, C; Vetro, P, \mathcal{G} -pairs and common fixed points in cone metric spaces, Rend. Circ. Mat. Palermo, 57, 279-285, (2008) · [Zbl 1164.54031](#)
- [16] Di Bari, C; Vetro, P, Weakly \mathcal{G} -pairs and common fixed points in cone metric spaces, Rend. Circ. Mat. Palermo, 58, 125-132,

- (2009) · [Zbl 1197.54060](#)
- [17] Ding, HS; Lu, L, Coupled fixed point theorems in partially ordered cone metric spaces, *Filomat*, 25, 137-149, (2011) · [Zbl 1289.54122](#)
- [18] Du, W-S, Coupled fixed point theorems for nonlinear contractions satisfied Mizoguchi-takahashi's condition in quasi-ordered metric spaces, No. 2010, (2010) · [Zbl 1194.54061](#)
- [19] Haghi, RH; Rezapour, S; Shahzad, N, Some fixed point generalizations are not real generalizations, *Nonlinear Anal*, 74, 1799-1803, (2011) · [Zbl 1251.54045](#)
- [20] Hu, X-Q; Ma, X-Y, Coupled coincidence point theorems under contractive conditions in partially ordered probabilistic metric spaces, *Nonlinear Anal*, 74, 6451-6458, (2011) · [Zbl 1238.54025](#)
- [21] Jachymski, J, Equivalent conditions for generalized contractions on (ordered) metric spaces, *Nonlinear Anal*, 74, 768-774, (2011) · [Zbl 1201.54034](#)
- [22] Lazar, VL, Fixed point theory for multivalued ϕ -contractions, No. 2011, (2011) · [Zbl 1315.47041](#)
- [23] Luong, NV; Thuan, NX, Coupled fixed points in partially ordered metric spaces and application, *Nonlinear Anal*, 74, 983-992, (2011) · [Zbl 1202.54036](#)
- [24] Nashine, HK; Samet, B; Vetro, C, Monotone generalized nonlinear contractions and fixed point theorems in ordered metric spaces, *Math. Comput. Model*, 54, 712-720, (2011) · [Zbl 1225.54022](#)
- [25] Nashine, HK; Samet, B, Fixed point results for mappings satisfying [inlinenequation not available: see fulltext.]-weakly contractive condition in partially ordered metric spaces, *Nonlinear Anal*, 74, 2201-2209, (2011) · [Zbl 1208.41014](#)
- [26] Nashine, HK; Shatanawi, W, Coupled common fixed point theorems for a pair of commuting mappings in partially ordered complete metric spaces, *Comput. Math. Appl*, 62, 1984-1993, (2011) · [Zbl 1231.65100](#)
- [27] Rezapour, S; Amiri, P, Some fixed point results for multivalued operators in generalized metric spaces, *Comput. Math. Appl*, 61, 2661-2666, (2011) · [Zbl 1221.54071](#)
- [28] Rezapour, S; Haghi, RH, Some notes on the paper 'cone metric spaces and fixed point theorems of contractive mappings', *J. Math. Anal. Appl*, 345, 719-724, (2008) · [Zbl 1145.54045](#)
- [29] Rezapour, S; Haghi, RH; Rhoades, BE, Some results about T -stability and almost T -stability, *Fixed Point Theory*, 12, 179-186, (2011) · [Zbl 1281.47052](#)
- [30] Rezapour, S; Haghi, RH; Shahzad, N, Some notes on fixed points of quasi-contraction maps, *Appl. Math. Lett*, 23, 498-502, (2010) · [Zbl 1206.54061](#)
- [31] Rus, MD, Fixed point theorems for generalized contractions in partially ordered metric spaces with semi-monotone metric, *Nonlinear Anal*, 74, 1804-1813, (2011) · [Zbl 1221.54072](#)
- [32] Samet, B; Vetro, C, Coupled fixed point theorems for multi-valued nonlinear contraction mappings in partially ordered metric spaces, *Nonlinear Anal*, 74, 4260-4268, (2011) · [Zbl 1216.54021](#)
- [33] Samet, B; Vetro, C; Vetro, P, Fixed point theorems for α - ϕ -contractive type mappings, *Nonlinear Anal*, 75, 2154-2165, (2012) · [Zbl 1242.54027](#)
- [34] Shatanawi, W; Samet, B, On [inlinenequation not available: see fulltext.]-weakly contractive condition in partially ordered metric spaces, *Comput. Math. Appl*, 62, 3204-3214, (2011) · [Zbl 1232.54041](#)
- [35] Vetro, F, On approximating curves associated with nonexpansive mappings, *Carpath. J. Math*, 27, 142-147, (2011) · [Zbl 1265.54208](#)
- [36] Vetro, P, Common fixed points in cone metric spaces, *Rend. Circ. Mat. Palermo*, 56, 464-468, (2007) · [Zbl 1196.54086](#)
- [37] Zhang, X, Fixed point theorems of multivalued monotone mappings in ordered metric spaces, *Appl. Math. Lett*, 23, 235-240, (2010) · [Zbl 1203.54052](#)
- [38] Zhilong, L, Fixed point theorems in partially ordered complete metric spaces, *Math. Comput. Model*, 54, 69-72, (2011) · [Zbl 1225.54030](#)

This reference list is based on information provided by the publisher or from digital mathematics libraries. Its items are heuristically matched to zbMATH identifiers and may contain data conversion errors. It attempts to reflect the references listed in the original paper as accurately as possible without claiming the completeness or perfect precision of the matching.