

FIXED POINT THEOREMS FOR NON-SELF MAPPINGS WITH NONLINEAR CONTRACTIVE CONDITION IN STRICTLY CONVEX Menger PM-SPACES

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Abstract. In this paper, existence and uniqueness of a fixed point for non-self mappings with nonlinear contractive condition in the sense of Fang [On φ -contractions in probabilistic and fuzzy metric spaces. *Fuzzy Set Syst.* (267) 2015, 86–99] will be proved, using the notion of strictly convex structure introduced by Ješić et al. [Ješić, S.N, Nikolić, R.M., Babačev N.A., A Common Fixed Point Theorem in Strictly Convex Menger PM-spaces, *Filomat* (28)(4) 2014, 735–743] for Menger PM-spaces. As a consequence of main result we will give probabilistic generalization of Assad and Kirk's result [Assad, N.A., Kirk, W.A., Fixed-point theorems for set-valued mappings of contractive type. *Pacific J. Math.* (43) 1972, 553–562].

Key Words and Phrases: Menger PM-spaces, strictly convex structure, fixed point, non-self mappings.

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