ON FIXED POINT THEOREM IN RECTANGULAR B-METRIC MENGER SPACE.

TOSHIKAZU WATANABE

Probabilistic metric spaces were introduced in 1942 by Menger [7]. Sehgal, in his Ph.D. Thesis [8], extended the notion of a contraction mapping to the setting of the Menger probabilistic metric spaces. The probabilistic version of the classical Banach Contraction Principle was first studied in 1972 by Sehgal and Bharucha-Reid [9]. After that many authors have obtained fixed point theorems for probabilistic φ-contractions under the assumption that φ is nondecreasing and such that $\sum_{n=1}^{\infty} \varphi^n(t) < \infty$ for any $t > 0$ (see, e.g., [2] and the references in [4]). Ćirić [1] consider Boyd and Wang condition and Jachymski [6] correctly defined the conditions. In [3] Fang by means of weakening conditions of the gauge function φ, a new fixed point theorem for probabilistic φ-contraction in Menger probabilistic metric spaces with a t-norm of H-type is established. This theorem improves and generalizes the recent results of Ćirić [1], Jachymski [6] and Xiao et al.[10]

In this talk, we consider the extsntion of φ-contraction in b-metric or rectangle Menger probabilistic metric spaces.

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(Toshikazu Watanabe) College of Science and Technology, Nihon University, Tokyo 101–8308, Japan

Email address: watanabe.toshikazu20@nihon-u.ac.jp

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