

Keynote Talk: Some Recent Fixed-Point Results with Applications

T. Som

Department of Mathematical Sciences, Indian Institute of Technology (BHU), Varanasi

*Corresponding author's e-mail: tsom.apm@iitbhu.ac.in

ABSTRACT

The well-known metric fixed-point theory based on Banach contraction (1922) principle has gone through several generalizations on various aspects by researchers over last six decades, by either modifying the contractive condition or changing the space structure or both and the literature on this theory is full of various results obtained by experts all over the globe. Many of these results have applications on the existence of solutions of differential equations, integral equations or on numerical approximations etc. These developments centre around results on unique fixed point, common fixed point, coupled fixed point or fixed point of φ contraction, multivalued mappings, fuzzy mappings etc on a concerned space viz metric space, Banach space, probabilistic metric space, fuzzy metric space Branciari Sb-metric space etc. Recently the unique fixed-point result of Wardowski (2012) has given another turn to the fixed-point theory of F-contraction and its further extensions. In the present talk a focus is given on some of these developments along with its applications.

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