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Zead yousef Mustafa* (zmagablh@hu.edu.jo), The Hashemite University, Faculty of Science, Dep. of Mathematics, Zarqa, 13115, Jordan. *Some Fixed Point Theory of Mappings on G-Metric Spaces I*. Preliminary report.

In 1992 B. C. Dhage proposed the notion of a D -metric space in an attempt to obtain analogous results to those for metric spaces, but in a more general setting. In a subsequent series of papers Dhage attempted to develop topological structures in such spaces. He claimed that D -metrics provide a generalization of ordinary metric functions and went on to present several fixed point results. Subsequently, these works have been the basis for over 40 papers by Dhage and other authors.

However, in collaboration with Brailey Sims ([Proceedings of the International Conference on Fixed Point Theory and its Applications - Valencia, 2003]), we have demonstrated that most of the claims concerning the fundamental topological properties of D - metric spaces are incorrect.

Alternatively we introduced ([Anew Approach to Generalize Metric Spaces, J. of Nonlinear Convex Anal., No.2, 286-297 (2006).]) more robust, concept of a generalized metric space, which we call a G -metric space.

In this talk we will prove some fixed point theory of mappings satisfying sufficient conditions on Complete G -metric spaces. (Received July 25, 2007)