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ON VARIANTS OF CONTINUITY AND EXISTENCE OF FIXED POINT VIA MEIR-KEELER CONTRACTIONS IN MC-SPACES

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Abstract. The question of continuity of contractive map and in particular continuity at fixed points emerged with the publication of research papers by R. Kannan in 1968 and 1969 respectively. In fact continuity of a map is essential prerequisite for establishing fixed point. Probably the foremost common fixed point theorem without using the notion of continuity was established by Pant [*Discontinuity and fixed points*, J. Math. Anal. Appl., **240**(1999), 284-289] when he introduced the idea of non-compatibility. First weaker form of continuity known as reciprocal continuity was also introduced by Pant [*A common fixed point theorem under a new condition*, Indian J. Pure Appl. Math., **30**(1999), No. 2, 147-155]. Subsequently several generalizations of this notion have been obtained. Our aim is to discuss brief development of weaker forms of continuity of maps in fixed point consideration. Further coincidence and common fixed point for noncommuting discontinuous maps via Meir-Keeler contractions on non complete MC-space without using containment of range space of involved maps are obtained and illustrated by examples.

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