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Document Title : EXISTENCE OF FIXED POINTS IN COMPLETE METRIC SPACES WITH A GENERALIZED DISTANCE

وجود نقاط ثابتة في فترات مترية تامة مع مسافة معممة

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Abstract : In the setting of metric spaces Kada et al. have introduced a notion of w-distance and improved several type of results replacing the involved metric by a newly defined w-distance. Recently, Suzuki and Takahashi established some fixed point results for singlevalued and multivalued contractive maps with respect to w-distance, which improve the corresponding results of Nadler, Edelstein , Ciric, Caristi and many others. On the other hand, without using the concept of Hausdorff metric, most recently, Feng and Liu generalized the Nadlers fixed point result. In this thesis, we study the concept of w-distance and some of its useful properties. We also present some known fixed point results for single valued and multivalued maps with respect to w-distance. Moreover we provide a substantial improvement of the known fixed point results and prove some new results on the existence of fixed points for contraction type maps with respect to w-distance. Our results improve and generalize the corresponding fixed point results due to Feng and Liu , Latif and Beg , Kannan , Ume , Mizoguchi and Takahashi and many others

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