FIXED POINT RESULTS UNDER GENERALIZED c-DISTANCE WITH APPLICATION TO NONLINEAR FOURTH-ORDER DIFFERENTIAL EQUATION

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Abstract. We consider the notion of generalized c-distance in the setting of ordered cone b-metric spaces and obtain some new fixed point results. Our results provide a more general statement, under which can be unified some theorems of the existing literature. In particular, we refer to the results of Sintunavarat et al. [W. Sintunavarat, Y.J. Cho, P. Kumam, Common fixed point theorems for c-distance in ordered cone metric spaces, Comput. Math. Appl. 62 (2011) 1969-1978]. Some examples and an application to nonlinear fourth-order differential equation are given to support the theory.
Key Words and Phrases: Partially ordered set, ordered cone b-metric space, generalized c-distance, fixed point.
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