FIXED POINTS OF GENERALIZED GRAPHIC CONTRACTION MAPPINGS IN PARTIAL METRIC SPACES ENDOWED WITH A GRAPH

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ABSTRACT. In [The contraction principle for mappings on a metric space with a graph, Proc. Amer. Math. Soc., 136(2008), 1359-1373], Jachymski employed an interesting order theoretic approach to solve a fixed point problem in the setup of metric spaces endowed with a graph. On the other hand, in [Partial metric topology, in: Proc. 8th Summer Conference on General Topology and Applications, Ann. New York Acad. Sci., 728(1994), 183-197], Matthews introduced the concept of a partial metric as a part of the study of denotational semantics of dataflow networks. He gave a modified version of the Banach contraction principle, more suitable in this context. In this paper, existence of a fixed point of generalized graphic contraction mappings in the framework of partial metric spaces is proved. An example is provided to validate our result. Results proved herein unify, generalize and complement various known comparable results in contemporary literature.

REFERENCES


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