COMPARABLE LINEAR CONTRACTIONS
IN ORDERED METRIC SPACES

AFTAB ALAM* AND MOHAMMAD IMDAD**

*Department of Mathematics, Aligarh Muslim University, Aligarh-202002, India
E-mail: aftab_math.rs@amu.ac.in

**Department of Mathematics, Aligarh Muslim University, Aligarh-202002, India
E-mail: mhimdad@amu.ac.in

Abstract. In this paper, with a view to improve the $g$-monotonicity condition, we introduce the notion of $g$-comparability of a mapping defined on an ordered set and utilize the same to prove some existence and uniqueness results on coincidence points for linear contraction without $g$-monotonicity in ordered metric spaces. Our results extend some classical and well known results due to Ran and Reurings (Proc. Amer. Math. Soc. 132 (2004), no.5, 1435-1443), Nieto and Rodríguez-López (Acta Math. Sin. 23 (2007), no.12, 2205-2212), Turinici (Libertas Math. 31 (2011), 49-55), Turinici (Math. Student 81 (2012), no.1-4, 219-229) and Dorić et al. (RACSAM 108 (2014), no.2, 503-510) and similar others.

Key Words and Phrases: Ordered metric space, $g$-monotone mappings, comparable mappings, TCC property, termwise monotone sequence.

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REFERENCES


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