

**COMMON FIXED POINT THEOREMS FOR FOUR MAPS IN
ORBITALLY COMPLETE METRIC SPACE UNDER
COMPATIBILITY AND WEAKLY COMPATIBILITY CONDITION**

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Abstract

Some common fixed point theorems are established for pair wise compatible mappings in orbitally complete metric space under compatibility and weakly compatibility condition. The results generalized corresponding theorems of [2], [5], [9], [10] and [16]. We thus give evidence significant role of compatibility in producing fixed points. We are generalized the contractive condition and taking weak compatibility condition in the place of compatibility. Jungck [7] have introduced concept of compatibility of mappings. Note that such type of compatibility generalized by Jungck and Rhoades [8], known as concept of weakly compatible mappings and in setting of single-valued and multi-valued mapping Shrivastava et al. [15] have introduced the concept of compatible mappings of type (N). These two concepts are equivalent in the setting of single valued maps. Replacing orbital continuity and orbital completeness by continuity and completeness respectively and replacing computability by weak commutativity we again get theorems of [13] and [14] for three maps. We have thrown an open problem in the end baed on the concept of "OWC" introduced by [1].

Key Words : *Weak compatibility, Orbitally completeness, Common fixed point, Occasionally weakly compatibility.*

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