

**BEST PROXIMITY POINT THEOREMS FOR α -GERAGHTY
CONTRACTION TYPE MAPS IN METRIC SPACES**

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Abstract: In this paper we introduce a notion of α -Geraghty contraction type maps in the setting of a metric space. We also establish a Best Proximity point theorem for such maps using p -property.

Keywords and Phrases: Best Proximity point, α -Geraghty contraction type map, metric spaces, p -property, triangular α -admissible, generalized α -Geraghty contraction.

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1. Introduction and Preliminaries

The Banach contraction principle [4], which is a useful tool in the study of many branches of mathematics and mathematical sciences, is one of the earlier and fundamental results in fixed point theory. Because of its importance in non-linear analysis, a number of authors have improved, generalized and extended the basic result either by defining a new contractive mappings in the context of complete metric space or by investigating the existing contractive mappings in various abstract spaces.

In particular, Geraghty [8] obtained a generalized of Banach contraction principle in the setting of complete metric space by considering a auxiliary function.

Later Amini Harandi and Emami [2] characterised the result of Geraghty in the context of partially ordered complete metric space. Cabellero et al. [5] discussed the existence of the best proximity of Geraghty contraction.