

N_δ -CONTINUITY IN NEUTROSOPHIC TOPOLOGICAL SPACES

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Abstract. The research work proposes the theory of N_δ -continuous functions (briefly $N_{\delta-CF}$) and neutrosophic almost continuous functions (briefly N_{ACF}) in neutrosophic topological spaces (briefly N_{TS}). The characterizations of $N_{\delta-CF}$ and N_{ACF} are analyzed and the properties are inspected.

1. Introduction

In 1965 Zadeh [10] with his vital theory on fuzzy sets (FS) that has non-probabilistic uncertainty into the mathematical pattern where the said concept never gets exorted by the randomness of an event. A degree of belongingness with some value prevails between 0 and 1 for each and every element in this, universe which is the membership value of an element in that set, which is known as FS , to analyze vague data in applications. As to handle uncertain circumstances which up vote from the prevailing vagueness or from a partial belongingness, FS is highly likely to handle successfully. Although, modelling a mathematical element is uncertain for every kind of real physical problems.

In 1986 Atanassov [8], generalized FS which in turn led to the emergence of the concept of intuitionistic fuzzy sets (IFS). In FS it is a known fact that it has a membership value for every element based on its vagueness and belongingness. Whereas, Atanassov states that there is a non-membership value devoted to each element. When the sum of membership value and non-membership value is less or equal to unity, a constraint occurs. In IFS , degree of non-belongingness is dependent on the degree of belongingness. The IFS by nature has the ability to analyze the complete and incomplete vague data. IFS s are resourceful in applications such as expert systems, belief systems and information fusion etc.

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