

ON $\mathcal{N}_{*g\alpha}$ - CLOSED SET IN NEUTROSOPHIC TOPOLOGICAL SPACES

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Abstract. In this article, we introduce the conception of $\mathcal{N}_{*g\alpha}$ -Closed Set (briefly $\mathcal{N}_{*g\alpha}$ -CS) in neutrosophic topological spaces (briefly NTS). Further establishes their properties.

1. Introduction

The denotation of neutrosophic set was commenced by Smarandache[9] and clarified that the neutrosophic set is a generalization of intuitionistic fuzzy set (*IFS*). Salama and Alblawi[6] proposed the conception of neutrosophic topological space (NTS) in 2012 that had been investigated recently. All the elements within neutrosophic set have the degree of membership, indefiniteness and degree of non-membership values. Arokiarani et al.[2] introduced the α -closed set in NTS. Dhavaseelan and Saied Jafari[3] introduced neutrosophic generalized closed sets in 2017. Sreeja et al.[10] studied the denotation of neutrosophic $g\alpha$ -closed sets and neutrosophic $g\alpha$ -open sets in NTS. Vigneshwaran et al.[11] defined a new closed set as $*g\alpha$ -closed sets in topological spaces which has been applied to define some topological functions as continuous functions, irresolute functions and homeomorphic functions with some separable axioms. The purpose of this paper is to incorporate the idea of $\mathcal{N}_{*g\alpha}$ -CS in NTS and also study their properties.

2. Preliminaries

In this section, we recall some of basic definitions which was already defined by various authors and useful in the sequel.

Definition 2.1. [8] Let \mathcal{W} be a non empty fixed set. A neutrosophic set \mathcal{S} is an object of the following form

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