

δ_s^α -CLOSED SET AND ITS APPLICATIONS

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Abstract: This paper deals with a new type of crisp subset, viz., δ_s^α -closed set of a set X endowed with fuzzy topology. Using this newly defined set, we introduce and study δ_s^α -continuity between two fuzzy topological spaces. Lastly, we show that under this function δ_s^α -almost compactness remains invariant.

Keywords and Phrases: α -shading, δ_s^α -closed set, δ_s^α -Urysohn space, δ_s^α -almost compact space.

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1. Introduction

In [7], α -shading in a fuzzy topological space is introduced. Afterwards, different types of compactness are introduced using this concept as a basic tool which is a generalization of fuzzy compactness introduced by Chang [5]. Using α -shading in [4], δ_s^α -almost compactness is introduced and studied for crisp subsets in a fuzzy topological space. In this paper a class of crisp subsets, called δ_s^α -closed subsets is introduced. Then establish that δ_s^α -almost compactness of a space is inherited by such subsets.

2. Preliminaries

Throughout this paper, (X, τ) or simply by X , we shall mean a fuzzy topological space (fts, for short) in the sense of Chang [5]. An ordinary subset A of X is said to be a crisp subset of X where the underlying structure of the set X being a fuzzy