

Fuzzy α - b -almost compact space

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ABSTRACT. This paper deals with some applications of fuzzy α - b -open set. Here we introduce fuzzy α - b -almost compactness and characterize this concept via fuzzy net and prefilterbase. Also we introduce fuzzy regularly α - b -open set which characterizes fuzzy α - b -almost compactness. It is shown that fuzzy α - b -almost compactness implies fuzzy almost compactness and the converse is true only on fuzzy α - b -regular space.

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Keywords: Fuzzy α - b -open set, Fuzzy α - b -regular space, Fuzzy regularly α - b -closed set, Fuzzy α - b -almost compact set (space), αb -adherent point of a prefilterbase, αb -cluster point of a fuzzy net.

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1. INTRODUCTION

Fuzzy α - b -open set was introduced in [1] using fuzzy α -open set as a basic tool. After introducing fuzzy compactness by Chang [2], many mathematicians have engaged themselves to introduce different types of fuzzy compactness. In [3], fuzzy almost compactness was introduced.

In this paper, we introduce the concept of fuzzy α - b -almost compactness which is weaker than fuzzy almost compactness. Here we use fuzzy net [4] and prefilterbase [5] to characterize fuzzy α - b -almost compactness.

In recent time, different types of fuzzy sets, viz., fuzzy soft set and fuzzy octahedron set are introduced and studied. A new branch of fuzzy topology is developed using these types of fuzzy sets. In this context we have to mention [6, 7, 8, 9, 10, 11].

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