FUZZY p^*-PRECOMPACT TOPOLOGICAL SPACES

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Abstract. In this paper a new type of compactness in fuzzy topological spaces is introduced and studied by using p^*-preopen set [1] as a basic tool. We characterize this newly defined compactness by fuzzy net and prefilterbase. It is shown that this compactness implies fuzzy almost compactness [3] and the converse is true only on fuzzy p^*-preregular space [1]. Afterwards, it is shown that this compactness remains invariant under fuzzy p^*-preirresolute function [1].

1. Introduction

Fuzzy compactness is introduced by Chang [2]. Afterwards, many mathematicians have engaged themselves to introduce different types of fuzzy compactness. In [3], fuzzy almost compactness is introduced. In this paper we introduce fuzzy p^*-precompactness which is weaker than fuzzy almost compactness. Here we use fuzzy net [10] and prefilterbase [7] to characterize fuzzy p^*-precompactness. In this context we have to mention [6].

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