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ON FUZZY g^-CONTINUOUS MAPS AND FUZZY g^-HOMEOMORPHISMS IN FUZZY TOPOLOGICAL SPACES

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Abstract

The aim of this paper is to introduce a new class of fuzzy sets, namely $\hat{g}$ - closed fuzzy sets for fuzzy topological spaces. $\hat{g}$ -closed fuzzy sets, which are lies in between the class of closed fuzzy sets, semi-closed fuzzy sets and g- closed fuzzy sets. In this paper, we study many basic properties of $\hat{g}$ -closed fuzzy sets together with the relationships of these fuzzy sets with some other fuzzy sets. We introduce two new separation properties, namely fuzzy-$T\hat{g}$ spaces and fuzzy-$\hat{g}T$ spaces.

Further, the concept of fuzzy $\hat{g}$ -continuous, fuzzy $\hat{g}$ -irresolute mappings, fuzzy $\hat{g}$ -closed maps, fuzzy $\hat{g}$ -open maps and fuzzy $\hat{g}$ -homeomorphism in fuzzy topological spaces are also introduced, studied and some of there properties are obtained.

Key Words and Phrases: *$\hat{g}$ -closed fuzzy sets, fuzzy-$T\hat{g}$ spaces and fuzzy-$\hat{g}T$ spaces, $f\hat{g}$ -continuous, $f\hat{g}$ -irresolute, $f\hat{g}$ -open, $f\hat{g}$ -closed mappings and $f\hat{g}$-homeomorphism.*

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