

ON  $g^*\Psi$  - CLOSED FUZZY SETS AND FUZZY  $g^*\Psi$ -  
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  $g^*\Psi$ -closed fuzzy sets for fuzzy topological spaces. This class is obtained by generalizing  $\Psi$ -closed fuzzy sets via- $g$ -open fuzzy sets. This new class falls strictly between the class of  $g^*$ -closed fuzzy sets and the class of  $gsp$ -closed fuzzy sets. This class also falls strictly between class of  $\Psi$  - closed fuzzy sets and the class of  $gsp$ -closed fuzzy sets. The class of  $g^*\Psi$ - closed fuzzy sets properly contains the class of closed fuzzy sets, the class of  $\alpha$ -closed fuzzy sets and the class of semi-closed fuzzy sets.

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

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Key Words :  $g^*\Psi$  -closed fuzzy sets,  $fg^*\Psi$  -continuous,  $fg^*\Psi$  -irresolute,  $fg^*\Psi$  -open,  $fg^*\Psi$  -closed mappings and  $fg^*\Psi$  -homeomorphism.

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