

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 Ψ -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 Ψ - 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 α -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.

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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