Abstract no.: FYT4

NEW FORM OF SETS IN FUZZY NEUTROSOPHIC TOPOLOGICAL SPACE

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Neutrosophic set initiated by Smarandache is explored to different heights almost in all fields of science and engineering to overcome the inherent difficulties that existed in fuzzy vague and intustionstic fuzzy sets. This paper deals with a new class of sets namely fuzzy neutrosophic d-open set in fuzzy neutrosophic topological space. Some of its characterizations are studied.

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FUZZY $\alpha - \mathcal{C}$-OPEN SETS

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Arbitrary complement function : [0,1] → [0,1] generalizes the concepts of fuzzy open and closed sets. Fuzzy α-open and fuzzy α-closed sets are defined using fuzzy interior and closure operator. In this paper we propose to characterize fuzzy α-open sets using fuzzy $\mathcal{C}$ interior and fuzzy closure.

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ON TOPOLOGICAL STRUCTURES OF INTERVAL TYPE-2 FUZZY ROUGH SETS

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The present paper studies the relationship between interval type-2 (IT2) fuzzy rough sets and interval type-2 fuzzy topologies (*IT*2*F*-topologies) induced by IT2 fuzzy

relations. Specifically, we establish some notable results: (i) any serial IT2 fuzzy relation induces an *IT*2*F* topology (ii) any reflexive IT2 fuzzy relation and its transitive closure induce the same *IT*2*F* topology. Subsequently, we obtain the interior and closure IT2 fuzzy operators of *IT*2*F* topology induced by reflexive IT2 fuzzy relation and investigate their connection with IT2 fuzzy relation. Finally, the corresponding results are obtained when the relation is a similarity IT2 fuzzy relation.