α^*-CLOSURE OPERATOR IN FUZZY SETTING

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ABSTRACT. In this paper a new type of fuzzy closure operator, viz. fuzzy α^*-closure operator has been introduced and studied in fuzzy topological space and found the mutual relationship between fuzzy α^*-closure operator, fuzzy α-closure operator [1]. In Section 2, a new type of separation axiom has been introduced and studied and shown that under this separation axiom fuzzy α^*-closure operator is an idempotent operator. In the last section, a new type of fuzzy convergence viz., fuzzy α^*-convergence of a fuzzy net has been introduced and using this concept, fuzzy α^*-closure operator has been characterized.

REFERENCES

[1] Bin Shahna, A.S.; *On fuzzy strong semicontinuity and fuzzy precontinuity*, Fuzzy Sets and Systems 44 (1991), 303-308.
[2] Chang, C.L.; *Fuzzy topological spaces*, J. Math. Anal. Appl. 24 (1968), 182-190.
[3] Othman, Hakeem A. and Latha, S.; *New results of fuzzy Alpha-open sets, Fuzzy Alpha-continuous mappings*, Int. J. Contemp. Math. Sciences, Vol. 4, 2009, no. 29, 1415-1422.
[4] Pu, Pao Ming and Liu, Ying Ming ; *Fuzzy topology I. Neighbourhood structure of a fuzzy point and Moore-Smith convergence*, Jour. Math. Anal. Appl. 76 (1980), 571 - 599.
[5] Zadeh, L.A.; *Fuzzy Sets*, Inform. Control 8 (1965), 338-353.

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