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FURTHER PROPERTIES OF RIGHT DOWN OR LEFT DOWN IMPLICATION OPERATOR ON IFSs AND IFMs

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Abstract: In this paper, I study boundaries, regularities, first place anti-tonicity, second place isotonicity etc., using $\rightharpoondown$ operator. Further, I check distributive properties of $\rightharpoondown$ operator over $\vee$ and $\wedge$.

Keywords and Phrases: Intuitionistic Fuzzy Matrices (IFMs), Intuitionistic Fuzzy Set (IFS), Intuitionistic Fuzzy right down implication operator (IFRDIO).

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1. Introduction

After the introduction of fuzzy set theory by Zadeh [14] in 1965, fuzzy concept evolved in almost all fields. Hiroshi Hasimoto [4] used implication operator in fuzzy set and extended it to fuzzy Matrix. After the generalization of fuzzy theory Atanassov [2] as Intuitionistic fuzzy Set theory Im et. al., [5] extended it to Intuitionistic fuzzy Matrix. Meenakshi and Gandhimathi [7], Sriram and Murugadas [11, 12] developed this Intuitionistic fuzzy Matrix in finding the g-inverse, Intuitionistic fuzzy linear transformation etc. Sriram and Murugadas [13] extend the implicatin operator $\rightarrow$ to IFM and discussed several properties like sub-inverse, semi-inverse and obtained necessary and sufficient condition for the existence of g-inverse using the implication operator $\rightarrow$. The authors in [6,7,8,9,10] introduced right down or left down implication operators ($\leftharpoondown$ or $\rightharpoondown$) for IFS as well as IFM. I study some properties of it.