

NEW INTUITIONISTIC FUZZY SCORE FUNCTION AND ITS APPLICATION

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Abstract: In this paper we introduce a new score function and accuracy function for Intuitionistic fuzzy sets, which connects membership function, non-membership function and hesitancy. Ranking of intuitionistic fuzzy numbers based on the new score function is discussed. It is also applied in Medical Diagnosis.

Keywords and Phrases: Intuitionistic Fuzzy Sets, Intuitionistic Fuzzy Numbers, Score Function, Accuracy Function, Medical Diagnosis.

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1. Introduction

K. T. Atanassov in 1986 [1] introduced the concept of Intuitionistic Fuzzy Sets (IFS), characterized by a membership function and a non-membership function. It is more suitable for dealing with uncertainty. The concept of IFS has been widely studied and applied in various areas such as decision making problem, medical diagnosis, pattern recognition etc. Intuitionistic Fuzzy numbers (IFN) are special kind of IFS which are fit more suitably to describe uncertainty. In practical decision making situations ranking or comparing several Intuitionistic fuzzy values is important.