FUZZY RELIABILITY OF A FAULT TREE MODEL USING INTUITIONISTIC FUZZY SETS

RAJESH DANGWAL1, M.K. SHARMA2, ANITA BHATT
Department of Mathematics H.N.B. Garhwal University, Campus Pauri (U.K)
Email: dangwalrajesh@yahoo.co.in
Department of Mathematics, R.S.S. (PG), Pilkhuwa, Ghaziabad
Email: drmukeshsharma@gmail.com
Department of Mathematics H.N.B. Garhwal University, Campus Pauri (U.K)

ABSTRACT
Fault tree is an important tool to analyse the system Reliability. Present paper describes a new approach to evaluate the Reliability of a Fuzzy fault tree by using Intuitionistic Fuzzy sets. We have introduced a new distance method between intuitionistic fuzzy sets to determine the critical events and uncertainty contribution each one to the top event, using this method, the importance index is also calculated and compared with the weighed index. Numerical example is also given to illustrate the technique.

Keywords: Fuzzy Sets, Intuitionistic Fuzzy Sets, Triangular intuitionistic fuzzy numbers, Fuzzy Fault Tree Model, Minkawski’s distance.
2000 Mathematics Subject Classification Number: 68M15

REFERENCES


