Intuitionistic-Fuzzy Models in Risk Management

Grigore Albeanu, Spiru Haret University
Florin Popențiu-Vlădicescu, UNESCO Department, University of Oradea

Abstract:
This paper considers the evaluation of the Risk Priority Number (RPN) for FMEA (Failure Mode and Effects Analysis) approaches. There are presented: the traditional RPN method and existing fuzzy logic based methods. Intuitionistic-fuzzy numbers and computational methods involving IFNs are described, and a new methodology for RPN estimation is presented. Finally, the new IFN-FMEA risk assessment is explained (over specific defuzzyfication methods) and its usage is shown for software project risk management.
Keywords: Intuitionistic-Fuzzy numbers, IFN-Ranking, IFN-FMEA, Software project risk management