Abstract

Reliability has vital significance to engineers and designers in a safety system. Consequently, failures free operation of components or sub-systems is of their key concern. To assess the reliability of such systems quantitatively, failure data of the components or sub-systems is essentially required. In general, such data is either not pre-recorded or present in linguistic form (good, bad etc). For quantitative evaluation of reliability the usual probabilistic considerations seems to be inadequate. Therefore, in this paper, conventional fault tree analysis (FTA) approach integrated with fuzzy theory has been used to evaluate the reliability of a fire detector system using fuzzy failure possibilities of components (or sub-systems).

References

- Nikolaos, L. 2007. Fault trees, ISTE.

**Index Terms**

Computer Science  Fuzzy Systems

**Keywords**

Fire Detector System  Fault Tree  Fuzzy Failures  Fuzzy Numbers  Fta And Reliability