

Fuzzy Information in Reliability Analysis

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Abstract

In reliability analysis at least three kinds of fuzzy information exist. The first kind is fuzziness of life time data, and the second fuzzy values of quality parameters. Both can be described by fuzzy numbers or fuzzy vectors respectively. These kinds of fuzziness are present in both, objectivistic as well as Bayesian reliability analyses. Another kind of fuzzy information is fuzzy a priori information in Bayesian inference. Fuzzy a priori information can be expressed by so-called fuzzy probability distributions which are generalizations of standard probability distributions on measurable spaces. All kinds of fuzzy information mentioned above can be used in an integrated way in reliability analyses. Details will be presented in the talk.