

Generalized Residual Entropies in Survival Analysis

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Abstract

In conventional approach the well-known measures like failure rate functions or mean residual lifetime distributions are used to characterize lifetime distribution of a component in survival analysis and life testing studies. In fact information about the current age of the component can be taken into account for measuring its uncertainty of survival. Thus [2] proposed an alternative approach of characterization in terms of Shannon's conditional entropy. [7] studied lifetime distribution by using Shannon's residual entropy function. In the present communication we study some models of lifetime distribution characterization by using generalized residual entropy functions.

Keywords: Survival function, failure rate, mean residual lifetime function, residual entropy function, lifetime distribution, average codeword.

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