سمینار هفتگی گروه آمار

On weighted cumulative residual entropy

سخنران:

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مکان:

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خلاصه:

In analogy with the weighted Shannon entropy proposed by Belis and Guiasu (1968) and Guiasu (1986), we introduce a new information measure called weighted cumulative residual entropy (WCRE). This measure is based on the cumulative residual entropy (CRE) which was introduced by Rao et al. (2004). This new information is "length biased" shift – dependent that assigns larger weights to larger values of random variable. The properties of WCRE and a formula relating WCRE and weighted Shannon entropy are given. Related studies of reliability theory are covered. Our results include inequalities and various bounds to the WCRE. Conditional WCRE and some of its properties are discussed. The empirical WCRE is proposed to estimate this new information measure. Strong consistency and central limit theorem are provided. Similar to WCRE, we define WCE which is based on cumulative entropy (CE) and some of its properties are examined. Furthermore some characterization results are obtained based on the first (last) order statistics and WCE.