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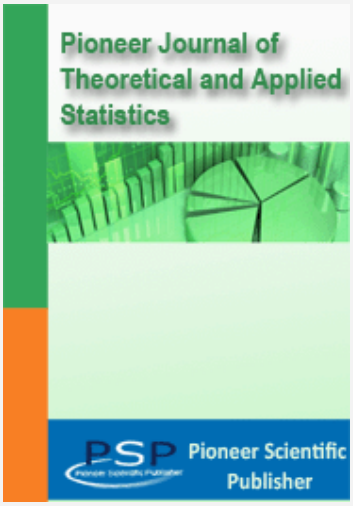

KUMARASWAMY LINEAR EXPONENTIAL DISTRIBUTION

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Abstract

The linear exponential distribution is a very well-known distribution for modeling lifetime data in reliability and medical studies. We introduce in this paper a new four-parameter generalized version of the linear exponential distribution which is called Kumaraswamy linear exponential distribution. We provide a comprehensive account of the mathematical properties of the new distributions. In particular, A closed-form expressions for the density, cumulative distribution and hazard rate function of the distribution is given. Also, the *r*th order moment and moment generating function are derived. The maximum likelihood estimation of the unknown parameters is discussed.

Keywords and phrases: Kumaraswamy distribution, Hazard function, linear failure rate distribution, maximum likelihood estimation, moments.