

A New Class of Distributions for Survival and Lifetime Data Analysis : Theory and Applications

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A new generalized class of distributions called the Loglogistic Extended-Weibull Logarithmic (LLoGEWL) distribution is developed and presented. Structural properties of the LLoGEWL distribution are derived. The special case of loglogistic Weibull logarithmic (LLoGWL) distribution is studied in detail. Method of maximum likelihood is used to estimate the parameters of this new distribution. A simulation study to examine the bias, mean square error of the maximum likelihood estimators for each parameter is presented. Finally, real data examples are presented to illustrate the applicability and usefulness of the proposed model.