National Institute of Technology Rourkela

Departmental Seminar

Seminar Title	: Estimation of common shape parameter of two weibull populations with unknown and different scales.
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Venue	: Seminar Hall, Departement of Mathematics
Date and Time	: 23 Jul 2024 (05.00 PM)

Abstract : The present paper addresses the problem of point estimation of the common shape parameter of two Weibull populations with different and unknown scales. Here, we take the most frequently used method, the maximum likelihood estimators (MLEs). As the closed form for our proposed model does not exist, we compute it numerically. Certain Bayes estimators using informative prior have been obtained. Like the MLEs, the closed form of these Bayes estimators does not exist, so approximation methods proposed by Lindley, Tierney & Kadane and the Markov chain Monte Carlo(MCMC) have been used to approximate the Bayes estimators. A detailed simulation study has been carried out to compare the performances of all the proposed estimators in terms of bias and mean squared error (MSE). A real-life data set is considered and analyzed for the purpose of illustration. Keywords: Estimation, Common parameter, Lindley approximation, Tierney & Kadane approximation, MCMC.