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On Bayesian Estimation in an Exponential Distribution Under Random Censorship

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Abstract: The paper gives some basic ideas of both the construction and investigation of the properties of the Bayesian estimates of certain parametric functions of the parent exponential distribution under the model of random censorship assuming the Koziol–Green model. Various prior distributions are investigated and the corresponding estimates are derived. The stress is put on the asymptotic properties of the estimates with the particular stress on the Bayesian risk. Small sample properties are studied via simulations in the special case.

Keywords: exponential distribution; random censoring; survival data analysis; reliability; Koziol–Green model; Bayesian estimates; Bayesian risk; conjugate priors; asymptotic properties; small sample properties; simulation study;

AMS Subject Classification: 62F10; 62F15;

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