



A New lifetime model for multivariate survival data with a surviving fraction

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In this paper we propose a new lifetime model for multivariate survival data with a surviving fraction. We develop this model assuming that there are m types of unobservable competing risks, where each risk is related to a time of the occurrence of an event of interest. We explore the use of Markov chain Monte Carlo (MCMC) methods to develop a Bayesian analysis for the proposed model. We also perform a simulation study in order to analyze the frequentist coverage probabilities of credible interval derived from posteriors. Our modeling is illustrated through a real data set.

Keywords: Bayesian inference; competing risks; MCMC; Multivariate Survival Models; Cure Rate Models; Cured Fraction.