Markov chain Monte Carlo convergence diagnostics for Gumbel model

ABSTRACT

Markov chain Monte Carlo (MCMC) has been widely used in Bayesian analysis for the analysis of complex statistical models. However, there are some isues on determining the convergence of this technique. It is difficult to determine the length of draws to make sure that the sample values converge to the stationary distribution and the number of n iterations should be discarded before the chain converge to the stationary distribution. Convergence diagnostics help to decide whether the chain converges during a particular sample run. Gelman and Rubin diagnostic is the most widely used method for convergence test. The MCMC technique, Metropolis-Hastings algorithm is used for posterior inferences of Gumbel distribution simulated data.