

Quasi-Reliable Estimates of Effective Sample Size

Robert Skeel, Purdue University

The efficiency of an Markov chain Monte Carlo algorithm is measured by the cost of generating one independent sample, or equivalently, the total cost divided by the effective sample size, defined in terms of the integrated autocorrelation time. To ensure the reliability of such an estimate, it is suggested that there be an adequate sampling of state space, to the extent that this can be determined from the available samples. A possible method for doing this is derived and evaluated.

This is joint work with Youhan Fang and Yudong Cao.