

Estimation of Stationary Probability of Semi-Markov Chains in General state Space

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Abstract

In the ergodic processes, one of the most important characteristics is their stationary probability. This presentation concerns the estimation of stationary probability of ergodic semi-Markov chains in general state space, based on an observation over a time interval. We derive asymptotic properties of the proposed estimator, when the time of observation goes to infinity, as consistency, asymptotic normality, law of iterated logarithm and rate of convergence in a functional setting. The proofs are based on asymptotic results on discrete-time semi-Markov random evolutions.

This is a joint work with: Bei Wu