

Adaptive Bayes-type estimators for noisily observed ergodic diffusion processes

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Abstract

We study theoretical and simulated performances of adaptive Bayes-type estimators corresponding to the quasi-likelihood functions for noisily observed ergodic diffusion processes proposed in Nakakita and Uchida (2019). We see that the adaptive Bayes-type estimators have good asymptotic properties as well as the adaptive maximum-likelihood-type (ML-type) ones. Our computational simulation shows that Bayes-type estimators perform almost the same as ML-type ones.

Keywords

Bayes-type estimators; diffusion processes; noisy observations; quasi-likelihood analysis; stochastic differential equations