

Convergence rates of posterior distributions for Brownian semimartingale models

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We consider the asymptotic behaviour of posterior distributions based on continuous observations from a Brownian semimartingale model. We present a general result that bounds the posterior rate of convergence in terms of the complexity of the model and the amount of prior mass given to balls centred around the true parameter. This result is illustrated for three special cases of the model: the Gaussian white-noise model, the perturbed dynamical system and the ergodic diffusion model. Some examples for specific priors are discussed as well.

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