On a Berry–Esseen type bound for the least squares estimator for diffusion processes based on discrete observations *

M. N. MISHRA[†] **and** B. L. S. PRAKASA RAO [‡]

Abstract

This paper is concerned with the distribution of a least squares estimator of the drift parameter in a stochastic differential equation with small diffusion observed over discrete set of time points with high frequency. The rate of convergence of the distribution of the least squares estimator to the standard normal distribution with an error bound is obtained when both the discretization step and the noise intensity decrease to zero.