

# Estimation for discretely observed diffusion processes with small dispersion parameter

Masayuki Uchida

Faculty of Mathematics, Kyushu University,  
Ropponmatsu, Fukuoka 810-8560, Japan.

The estimation of drift and diffusion coefficient parameters for  $d$ -dimensional diffusion processes with small dispersion parameter is stated when the data is observed at equidistant time points  $k/n$ ,  $k = 0, 1, \dots, n$ . Using the contrast function based on a Gaussian approximation to the transition density, we present asymptotic properties for the minimum contrast estimator as  $\epsilon$  goes to 0 and  $n$  goes to  $\infty$ .

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