

Sangyeol Lee · Yoichi Nishiyama · Nakahiro Yoshida

Test for parameter change in diffusion processes by cusum statistics based on one-step estimators

Received: 15 October 2004 / Revised: 1 April 2005 / Published online: 30 May 2006
© The Institute of Statistical Mathematics, Tokyo 2006

Abstract In this paper, we consider the problem of testing for a parameter change using the cusum test based on one-step estimators in diffusion processes. It is shown that under regularity conditions the cusum test statistic has the limiting distribution of a functional of Brownian bridge.

Keywords Test for parameter change · Cusum test · One-step estimator · Diffusion process · Weak convergence · Brownian bridge