

**Efficient pointwise estimation based on discrete data in ergodic
nonparametric diffusions**

Serguei Pergamenchikov (University of Rouen, Rouen, France)
(joint work with Leonid Galtchouk (University of Strasbourg, Strasbourg,
France))

Abstract

A truncated sequential procedure is constructed for estimating the drift coefficient at a given state point based on discrete data of ergodic diffusion process. A nonasymptotic upper bound is obtained for a pointwise absolute error risk. The optimal convergence rate and a sharp constant in the bounds are found for the asymptotic pointwise minimax risk. As a consequence, the efficiency is obtained of the proposed sequential procedure.