ON-LINE TRACKING OF A SMOOTH REGRESSION FUNCTION

Robert LIPTSER

Electrical Engineering Systems,Tel Aviv University,
69978 - Ramat Aviv, Tel Aviv, Israel
email: liptser@eng.tau.ac.il

We construct an on-line estimator with equidistant design fortracking a smooth function from Stone-Ibragimov-Khasminskii class.This estimator has the optimal convergence rate of risk to zero in sample size.The procedure for setting coefficients of the estimatoris controlled by a single parameter and has a simple numericalsolution. The off-line version of this estimator allowsto eliminate a boundary layer. Simulation results are given.