Bosq, D.

Nonparametric statistics for stochastic processes. Estimation and prediction. 2nd ed. (English) Zbl 0902.62099

Lecture Notes in Statistics (Springer). 110. New York, NY: Springer. xvi, 210 p. (1998).

[For the review of the first edition from 1996 see Zbl 0857.62081).]

This edition contains some improvements and corrections, and two new chapters. Chapter 6 deals with the use of local time in density estimation. The local time furnishes an unbiased density estimator and its approximation by a kernel estimator gives new insight in the choice of bandwidth. Implementation and numerical applications to finance and economics are gathered and developed in Chapter 7.

MSC:

62M09	Non-Markovian processes: estimation
62G07	Density estimation
62-02	Research exposition (monographs, survey articles) pertaining to statistics
60-02	Research exposition (monographs, survey articles) pertaining to probability theory
62M10	Time series, auto-correlation, regression, etc. in statistics (GARCH)
62M20	Inference from stochastic processes and prediction

Keywords:

nonparametric prediction; dependence structure; coupling techniques; inequalities; mixing processes; density estimation; discrete-time processes; uniform almost sure convergence; asymptotic normality; kernel estimators; random regressors; optimal asymptotics; mean square error; prediction of Markov processes; regression functions; continuous-time processes; irregular paths; superoptimality; local time; finance; economics; quadratic errors

Full Text: DOI