TIMES SERIES FLOWS OF BERNOULLI TYPE ASYMPTOTIC PROPERTIES

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Consider the time series which are generating by Bernoulli type random flow $Y = Y(x)$. In time moments $x_1, x_2, \dots, x_n$ we have sample $Y_1 = Y(x_1), Y_2 = Y(x_2), \dots, Y_n = Y(x_n)$ and $p(x_k) = P\{Y_k = 1\}$, $1 - p(x_k) = P\{Y_k = 0\}$. Our problem is to construct an estimation $\hat{p}_n(x)$ of unknown function $p(x)$ and to study its properties (consistency and asymptotic normality). This investigation is based on papers [1,2].

References

1. Babilua P., Nadaraya E., Sokhadze G. On the Integral Square Deviation Measure of a Nonparametric Estimator of the Bernoulli Regression. Theory of Probability and its Applications, Vol. 57, Issue 2, 2013. p. 265-278.
2. Babilua P., Nadaraya E., Sokhadze G. About nonparametric estimation of the Bernoulli regression. Communication in statistics – Theory and Methods. Vol. 42. Issue 22. 2013. p. 3989-4004.