Asymptotic Statistical Analysis Of Stationary Ergodic Time Series

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Resumo/Abstract:
It is shown how to construct asymptotically consistent efficient algorithms for various statistical problems concerning stationary ergodic time series. The considered problems include clustering, hypothesis testing, change-point estimation and others. For each of this problems in order for a consistent algorithm to exist the only required assumption on the distributions that generate the data is that they are stationary and ergodic. No mixing, independence or parametric assumptions are necessary. The presented approach is based on empirical estimates of the distributional distance. Some open problems are also discussed.