Non-convergence in probability of the overlapping function.

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31/07 - 06/08 de 2011

Let us consider the set of n-length sequences on a countable alphabet. We consider the function that gives the maximum size of an overlap that w_n has with itself, and denote it by $S_n(w_n)$, and call it *the overlapping function.* For n-sized IID sequences in our alphabet, we showed that the overlapping function converges in distribution, when n goes to infinity[AbLa].

In this work, we show that, on the same conditions, the convergence of S_n cannot be in probability.

We also show some behavior of the expectation of S_n and its limit as functions of the parameter space. Moreover, we present some bounds for $E(S_n)$ and its limit.

References

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