

Phantom distribution for non-stationary time series as an averaging operation

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Abstract

The notion of a phantom distribution function was introduced by O'Brien (1987). Doukhan et al. [1] showed that the existence of a continuous phantom distribution function is a quite common phenomenon among stationary sequences.

It should be noted that phantom distribution functions may exist also for non-stationary sequences and that the corresponding theory was developed in [3] and perfected in [4].

In the present lecture we discuss several examples of *non-stationary* sequences admitting a phantom distribution functions (including e.g. [2]). The conclusion is that if a phantom distribution function exists in the non-stationary case, it admits an interpretation as an averaging operator.

We discuss also other asymptotic representations for maxima of non-stationary sequences.

This is a *joint work* with Paul Doukhan.

References

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