PROBABILITY AND MATHEMATICAL STATISTICS Vol. 34, Fasc. 1 (2014), pp. 45–59

LIMIT PROPERTIES OF EXCEEDANCES POINT PROCESSES OF SCALED STATIONARY GAUSSIAN SEQUENCES

Enkelejd Hashorva Zuoxiang Peng Zhichao Weng

Abstract: We derive the limiting distributions of exceedances point processes of randomly scaled weakly dependent stationary Gaussian sequences under some mild asymptotic conditions. In the literature analogous results are available only for contracted stationary Gaussian sequences. In this paper, we include additionally the case of randomly inflated stationary Gaussian sequences with a Weibullian type random scaling. It turns out that the maxima and minima of both contracted and inflated weakly dependent stationary Gaussian sequences are asymptotically independent.

2000 AMS Mathematics Subject Classification: Primary: 60F05; Secondary: 60G15.

Keywords and phrases: Stationary Gaussian sequence, exceedances point processes, maxima, minima, joint limit distribution, random contraction, random scaling, Weibullian tail behaviour.

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