Mathematics > Statistics Theory

Precise large deviations for dependent regularly varying sequences

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We study a precise large deviation principle for a stationary regularly varying sequence of random variables. This principle extends the classical results of A.V. Nagaev (1969) and S.V. Nagaev (1979) for iid regularly varying sequences. The proof uses an idea of Jakubowski (1993,1997) in the context of centra limit theorems with infinite variance stable limits. We illustrate the principle for \sv\ models, functions of a Markov chain satisfying a polynomial drift condition and solutions of linear and non-linear stochastic recurrence equations.

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