THE RATE OF CONVERGENCE IN THE PRECISE LARGE DEVIATION THEOREM

Aleksandras Baltrūnas

Abstract: Let $X_1, X_2, \ldots$ be i.i.d. random variables with a common d.f. F. Let $S_n = X_1 + \ldots + X_n, n \geq 1$, and $M_n = \max_{k \leq n} X_k, n \geq 1$. In this paper for a large class of subexponential distributions we estimate the rate of convergence

$$\Delta_n(t) = P(S_n > t) - P(M_n > t),$$

where $n \geq 1$ and $t \geq 0$. We close this paper with some examples.

2000 AMS Mathematics Subject Classification: Primary 60F10; Secondary 60E05.

Key words and phrases: Limit theorems, large deviations, subexponential distributions.

THE FULL TEXT IS AVAILABLE HERE