UDC 519.21

МАТЕМАТИЧЕСКИЕ ТРУДЫ
2002, V. 5, N 1, 18–45

# THE RATE OF CONVERGENCE FOR WEIGHTED BRANCHING PROCESSES

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We consider a normed branching process $W_n$, generalizing the classical Galton–Watson model, in which particles have random weights (not necessarily positive). It is assumed that the weight of the parent particle is included into the weight of each of its offspring as a factor. The convergence rate of $W_n$ to its limit $W$ is evaluated. We give conditions in terms of the factors such that $W$ belongs to the domain of attraction (or to the domain of normal attraction) of an $\alpha$-stable distribution with $\alpha \in (1, 2]$.

*Key words and phrases*: weighted branching process, limit theorems, rate of convergence, domains of attraction and normal attraction of stable distributions.

Received
August 20, 2001

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Translated into English:
*Siberian Advances in Mathematics*, V. 12, N 4, 57–82 (2002).