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Convergence of Insurance Payout Stochastic Processes to Generalized Poisson Process

Chuprunov A., Permyakova E.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

 We consider stochastic processes describing the size of a company's insurance payouts in the case of a growing number of clients. Convergence of such processes in Skorokhod space is proved. As a result, a functional limit theorem for risk processes is obtained, which allows us to use well-known formulas for estimating an insurance company's ruin probability in the considered case.

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