

Stability Estimates of Generalized Geometric Sums and Their Applications

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Abstract: The upper bounds of the uniform distance $\rho\left(\sum_{k=1}^{\nu} X_k, \sum_{k=1}^{\nu} \tilde{X}_k\right)$ between two sums of a random number ν of independent random variables are given. The application of these bounds is illustrated by stability (continuity) estimating in models in queueing and risk theory.

Keywords: geometric sum; upper bound for the uniform distance; stability; risk process; ruin probability;

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