Sakhanenko, A. I.
Estimates for the accuracy of coupling in the central limit theorem. (English. Russian original)

For independent centered random variables $\xi_1, \ldots, \xi_N$ the author studies the difference $\Delta = S/B - Z$ where $S = \sum_{j=1}^{N} X_j, 0 < B^2 = \sum_{j=1}^{N} \text{var}\xi_j < \infty$ and $Z$ has a standard normal law. More exactly $S$ and $Z$ are constructed on some probability space. Under certain conditions the upper bound for $E\Delta^\alpha \exp(\lambda \Delta/8)$ is obtained in terms of the modification of Lyapunov’s ratio (here $\alpha \geq 1$ and $\lambda > 0$ is chosen in an appropriate manner). Several estimates for other functions of $\Delta$ are also established.

Reviewer: A.V.Bulinskij (Moskva)

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Keywords:
rates in the central limit theorem; modification of the Lyapunov ratio

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References:

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