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Approximation of functions from the isotropic Nikol'skii–Besov classes

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In the present talk, we study some problems of the approximation of the isotropic Nikol'skii–Besov classes $B_{p,\theta}^r(\mathbb{R}^d)$ [1] in the metrics of space $L_\infty(\mathbb{R}^d)$ and $L_1(\mathbb{R}^d)$.

We obtained the exact order estimates for the approximations of Nikol'skii–Besov classes by sums of de la Vallee Poussin type [2, p. 358] with support of their Fourier transforms are concentrated in d -dimensional parallelepiped.

- [1] P. I. Lizorkin, *Generalized Holder spaces $B_{p,\theta}^{(r)}$ and their correlations with the Sobolev spaces $L_p^{(r)}$* (Russian), *Sibirsk. Mat. J.* **9**, No 5, (1968), p. 1127–1152.
- [2] S. M. Nikol'skii, *Approximation of functions of several variables and imbedding theorems*, Nauka, Moscow, 1969.