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Approximation properties of generalized Fup-functions. (English) Zbl 1374.41026

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Summary: Generalized Fup-functions are considered. An almost-trigonometric basis theorem is proved. Spaces of linear combinations of shifts of the generalized Fup-functions are constructed and an upper estimate of the best approximation of classes of periodic differentiable functions by these spaces in the norm of $L_2[-\pi, \pi]$ is obtained.

MSC:

41A30 Approximation by other special function classes

41A50 Best approximation, Chebyshev systems

Keywords:

approximation of periodic functions; up-function; Kolmogorov width; best approximation; generalized Fup-function

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