Approximation of periodic functions by Zygmund means in Orlicz spaces.

Summary: In the present work, we investigate the approximation of the functions by Zygmund means in the Orlicz spaces $L_M(\mathbb{T})$ in the terms of the best approximation $E_n(f)_M$ and modulus of smoothness $\omega_k(\cdot, f)_M$.

MSC:

41A50  Best approximation, Chebyshev systems
42A10  Trigonometric approximation
41A10  Approximation by polynomials
41A25  Rate of convergence, degree of approximation
42B25  Maximal functions, Littlewood-Paley theory
46E30  Spaces of measurable functions ($L^p$-spaces, Orlicz spaces, Köthe function spaces, Lorentz spaces, rearrangement invariant spaces, ideal spaces, etc.)

Keywords:
reflexive Orlicz spaces; best approximation; trigonometric polynomials; $k$th modulus of smoothness; Zygmund means of order $k$

Full Text: DOI

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