TRIGONOMETRIC APPROXIMATION IN GENERALIZED LEBESGUE SPACES $L^{p(x)}$

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Abstract. The approximation properties of Nörlund ($N_n$) and Riesz ($R_n$) means of trigonometric Fourier series are investigated in generalized Lebesgue spaces $L^{p(x)}$. The deviations $\|f - N_n(f)\|_{p(x)}$ and $\|f - R_n(f)\|_{p(x)}$ are estimated by $n^{-\alpha}$ for $f \in \text{Lip}(\alpha, p(x))$ $(0 < \alpha \leq 1)$.


Keywords and phrases: Generalized Lebesgue space, Lipschitz class, modulus of continuity, Nörlund mean, Riesz mean.

REFERENCES


