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BASES IN L_p FROM EXPONENTS, COSINES AND SINES

Abstract

In the paper the system of exponents $E(\lambda_k) \equiv e^{i\lambda_k t}$, $k = 0, \pm 1, \ldots$ *is considered, where* $\{\lambda_k\}$ *is a sequence of complex members which has the asymptotic*

$$\lambda_k = n \pm \beta^{\pm} + O\left(|n|^{-\alpha^{\pm}}\right), \quad n \to \pm\infty,$$

$\beta^{\pm} \in C$ *are complex parameters. The necessary and sufficient condition of basisness of this system in* L_p, $1 < p < +\infty$ *is established.*