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TO THE M. RIESZ THEOREM ON ABSOLUTE CONVERGENCE OF THE TRIGONOMETRIC FOURIER SERIES

Abstract

In this paper we investigate a problem on spread of the known M. Riesz criterion for absolute convergence of the trigonometric Fourier series of continuous functions for the value $p \neq 2$. In particular, the upper estimates of the quantity characterizing the velocity of absolute convergence of Fourier series of the convolution of two functions by product of the best approximations of these functions are obtained. The exactness of corresponding estimates in the scale of power majorants is proved in the sense of the order.