

Year: 2016

Vol.: 89

Fasc.: 3

Title: Marcinkiewicz-like means of two dimensional Vilenkin–Fourier series

Author(s): György Gát

Let a be a lacunary sequence of natural numbers. In this paper, among others, we investigate means of two variable Vilenkin–Fourier series of the following kind: $t_n^{\alpha,a} f = \frac{1}{a_n} \sum_{k=0}^{a_n-1} S_{\alpha_1(n,k), \alpha_2(n,k)} f$, and prove the a.e. convergence $t_n^{\alpha,a} f \rightarrow f$ for each integrable function f . This immediately implies for the triangle means of the two variable integrable function f the a.e. relation $t_n^{\triangle,a} f = \frac{1}{a_n} \sum_{k=0}^{a_n-1} S_{k, a_n-k} f \rightarrow f$ ($n \rightarrow \infty$).

Address:

György Gát
Institute of Mathematics
University of Debrecen
H-4002 Debrecen
P. O. BOX 400
Hungary