On Approximative Properties of Some Polyanalytic Modules

© K.Yu. Fedorovskiy

Bauman Moscow State Technical University, Moscow, 105005, Russia

We are interested in the problems of approximability of functions by polyanalytic polynomials of the form $p_0(z) + \overline{z}^{k_1}p_1(z) + \ldots + \overline{z}^{k_n}p_n(z)$, where p_0, p_1, \ldots, p_n are polynomials in the complex variable as well as $1 \leq k_1 < k_2 < \ldots < k_n$ are integers, in norms of spaces L^p on the boundaries of plane simply connected domains. The obtained conditions for approximation are formulated in terms of special analytic characteristics of domains, on which the approximation is considered.

Keywords: polyanalytic function, Nevanlinna type pseudocontinuation, L^p-approximation.

K.Yu. Fedorovskiy, Ph.D., Assoc. Professor of "Applied Mathematics" Department of Bauman Moscow State Technical University. e-mail: afky@yandex.ru