

**ON THE GROWTH OF  $n$ -HARMONIC FUNCTIONS  
REPRESENTED BY THE POISSON-STIELTJES INTEGRAL IN A  
POLYDISC**

I.E. CHYZHYKOV AND O.A. ZOLOTA

Let  $P_r(\theta) = \frac{1-r^2}{1-2r \cos \theta + r^2}$  be the Poisson kernel,  $|z| = \max\{|z_j| : 1 \leq j \leq n\}$  be the polydisk norm in  $\mathbb{C}^n$ ,  $n \in \mathbb{N}$ ,  $P(z, w) = \prod_{j=1}^n P_{r_j}(\varphi_j - \theta_j)$ ,  $z_j = r_j e^{i\varphi_j}$ ,  $w_j = e^{i\theta_j}$ ,  $1 \leq j \leq n$ .

We describe the growth of the Poisson-Stieltjes integral

$$\int_{|w|=1} P(z, w) d\mu(w)$$

where  $\mu$  is a Borel measure on the skeleton  $\{w \in \mathbb{C}^n : |w| = 1\}$  in terms of the modulus of continuity of  $\mu$ .

DEPARTMENT OF MECHANICS AND MATHEMATICS, IVAN FRANKO NATIONAL UNIVERSITY OF  
LVIV, LVIV, UNIVERSYTETS'KA 1, UKRAINE

*E-mail address:* [ichyzh@lviv.farlep.net](mailto:ichyzh@lviv.farlep.net)

*E-mail address:* [o.zolota@gmail.com](mailto:o.zolota@gmail.com)