

**Fujita, Keiko; Morimoto, Mitsuo**

**Analytic functions and analytic functionals on some balls in the complex Euclidean space.**

(English) [Zbl 1045.32001](#)

Begehr, Heinrich G. W. (ed.) et al., Analysis and applications–ISAAC 2001.

Proceedings of the 3rd international congress, Berlin, Germany, August 20–25, 2001. Dordrecht: Kluwer Academic Publishers (ISBN 1-4020-1384-1/hbk). Int. Soc. Anal. Appl. Comput. 10, 151-159 (2003).

Generalizing the Lie norm, the Euclidean norm and the dual Lie norm, the authors define a series of norms  $\{N_p\}_{1 \leq p \leq \infty}$  on  $\mathbb{C}^{n+1}$ , consider holomorphic functions, entire functions of exponential type and analytic functionals on the  $N_p$ -balls  $\tilde{B}_p(r)$ , and characterize them by their growth behavior of their harmonic components in their double series expansion. By means of these results, the Martineau's theorem on Fourier-Borel transform is proved in the case of  $N_p$ -norm on the double series expansion.

For the entire collection see [\[Zbl 1031.35002\]](#).

Reviewer: [Eleonora Storozhenko \(Odessa\)](#)

**MSC:**

[32A10](#) Holomorphic functions of several complex variables

[32A05](#) Power series, series of functions of several complex variables

**Keywords:**

Lie norm; Euclidean norm; dual Lie norm; analytic functions; analytic functionals; homogeneous harmonic polynomials; inductive limit locally convex topology; growth behavior of harmonic components; double series expansion of holomorphic functions; entire functions of exponential type; Fourier-Borel transform