

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](#)