

Resum

Resumen

Summary

Introduction and motivation

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Chapter 1

Preliminaries: non-quasianalytic classes

Chapter 2

Generalized non-quasianalytic classes

Chapter 3

The problem of iterates on non-quasianalytic classes

The aim of this chapter is to extend to the ultradifferentiable setting the results by Komatsu, Newberger-Zielezny and Métivier mentioned in the introduction. After that, we obtain some results on the problem of iterates on non quasi analytic classes. The main result is Theorem ???. Under the assumption that the weight function ω verifies a growth condition introduced by Bonet, Meise and Melikhov, this theorem asserts that the equality $\mathcal{E}_{P,*(t^{\frac{1}{m}})}(\Omega) = \mathcal{E}_{*(t)}(\Omega)$ holds if and only if P is elliptic.

Chapter 4

Fréchet spaces invariant under differentiation

Chapter 5

Vector valued ultradifferentiable functions of Roumieu type in Fréchet spaces