



GROWTH OF POWER SERIES WITH NONNEGATIVE COEFFICIENTS, AND MOMENTS OF POWER SERIES DISTRIBUTIONS

ALICIA CANTÓN, JOSÉ L. FERNÁNDEZ, PABLO FERNÁNDEZ,
AND VÍCTOR J. MACIÁ

Dedicated to the memory of Luis Báez-Duarte

Abstract: Any power series with nonnegative coefficients has an associated family of probability distributions supported on the nonnegative integers. There is a close connection between the function theoretic properties of the power series and the moments of the family of distributions. In this paper, we describe that interplay, provide simpler proofs of some known results by emphasizing the probabilistic perspective, and present some new theorems.

2020 Mathematics Subject Classification: 30B10, 30D20, 60E05, 30D15.

Key words: power series distributions, moments, Khinchin families, clans, growth of entire functions, order.