

İSTANBUL ANALYSIS SEMINARS

TRANSFINITE DIAMETER AND POLYA THEOREM IN SEVERAL COMPLEX VARIABLES

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Abstract: Multivariate analogues of two classical results will be considered: first, the Fekete Theorem on the coincidence of transfinite diameter and Chebyshev constant for any compact set in \mathbb{C} ; second, the Polya Theorem on the asymptotic estimate of Hankel determinants, generated by Taylor coefficients of a function analytic at the infinity, in terms of the transfinite diameter of any compact set, which contains all singularities of the function. We give a detailed analysis of the main steps in the proofs of these analogues. Some open problems will be discussed.

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