

УДК 517.53 + 517.574

Subsequences of zeros
for classes of holomorphic functions,
and the entropy of arcwise connectedness

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Аннотация

Let Ω be a domain in the complex plane \mathbb{C} , $H(\Omega)$ be a space of holomorphic functions in Ω , \mathcal{P} be a collection of subharmonic functions in Ω . Let $H_{\mathcal{P}}(\Omega)$ be a space of functions $f \in H(\Omega)$ such that $|f(z)| \leq C_f \exp p_f(z)$, $z \in \Omega$, where $p_f \in \mathcal{P}$, and C_f is a constant. Conditions are obtained under which given set $\Lambda \subset \Omega$ is zero subset of a nonzero holomorphic function from class $H_{\mathcal{P}}(\Omega)$. As a rule results and method are new already for case, when $\Omega = \mathbb{D}$ is the unit disk, even for the system \mathcal{P} of radial majorants $p(z) = p(|z|)$.

Keywords: holomorphic function, function algebra, weighted space, zero set, uniqueness set, Jensen measure, entropy