

General solution of corona problem

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Our main result is a description of the spectrum of the bidual algebra A^{**} of a uniform algebra A . This allows us to obtain abstract corona theorem for certain uniform algebras, asserting density of a specific Gleason part in the spectrum of an H^∞ – type subalgebra of A^{**} . There is an isometric isomorphism of the latter subalgebra with $H^\infty(G)$ for a wide class of domains $G \subset \mathbb{C}^d$. Using abstract corona theorem we show the density of the canonical image of G in the spectrum of $H^\infty(G)$, solving positively corona problem for this class (which in particular includes balls and polydisks).

The talk is based on joint work with Krzysztof Rudol.