Reverse estimates in spaces of analytic functions

Evgeny Abakumov

University Paris-Est Marne-la-Vallée, France
evgueni.abakoumov@u-pem.fr

Session: 33. Spaces of analytic functions

Given a radial weight w on the unit disk D, the growth space A^w consists of those $f \in Hol(D)$ for which $|f(z)| \leq Cw(z)$, $z \in D$. A natural problem motivated by applications is to find test functions $f_1, f_2, \ldots, f_k \in A^w$ such that the following reverse estimate holds: $|f_1(z)|+|f_2(z)|+\ldots+|f_k(z)| \geq w(z)$, $z \in D$. We characterize, up to equivalence, those w for which the reverse estimate problem is solvable. We discuss generalizations to several complex variables and various applications related to composition operators, Bloch spaces, Carleson measures etc. Joint work with E. Doubtsov.