

INSTITUTUL DE MATEMATICĂ “SIMION STOILOW” AL ACADEMIEI ROMÂNE

Conferința lunară

*On the relationship between D'Angelo q -type
and Catlin q -type*

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Abstract: Joseph J. Kohn proved in 1979 that for a pseudoconvex domain in \mathbb{C}^n with real-analytic boundary the subellipticity of the $\bar{\partial}$ -Neumann problem for (p,q) forms is equivalent to the property that all holomorphic varieties of complex dimension q have finite order of contact with the boundary of the domain. Soon afterwards, John D'Angelo introduced a quantitative measure for this order of contact, presently known as the D'Angelo q -type, Δ_q . David Catlin was working on extending Kohn's result to smooth pseudoconvex domains and introduced another order of contact. Catlin's notion is what became known as Catlin q -type, D_q . In this talk we relate Δ_q with D_q for $q > 1$.

Based on joint work with Andreea Nicoara.