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Andreea C Nicoara* (anicoara@math.harvard.edu), Science Center 433, Department of Mathematics, Harvard University, 1 Oxford Street, Cambridge, MA 02138. *Equivalence of Types.*

Joseph J. Kohn defined the first multiplier ideal sheaf in 1979, while investigating the subellipticity of the $\bar{\partial}$ -Neumann problem. He designed an algorithm that generates an increasing chain of ideals, whose termination implies subellipticity. Kohn proved that for a pseudoconvex domain in \mathbb{C}^n with real-analytic boundary this termination condition called finite ideal type is equivalent to subellipticity of the $\bar{\partial}$ -Neumann problem for (p, q) forms on the domain and to the property that all holomorphic varieties of complex dimension q have finite order of contact with the boundary of the domain. The latter condition is called finite D'Angelo type. Equivalence of finite ideal type and finite D'Angelo type on a smooth pseudoconvex domain is known as the Kohn Conjecture. I will discuss my recent work on the equivalence of types for a domain with boundary in a Denjoy-Carleman quasianalytic class as well as for a smooth domain. (Received January 12, 2007)