Algebraic Geometry Seminar

The Kohn algorithm for subelliptic multipliers

Martino Fassina (UIUC)

Abstract: In 1979 Kohn introduced a procedure to prove subelliptic estimates for the Cauchy-Riemann equations. Over the years, many people have studied algebraic aspects of this algorithm, and in particular the question of its effectiveness. I will show how, in the polynomial case, the problem can be tackled by applying effectiveness results of Kollár and Jelonek from commutative algebra. Simple examples show that the Kohn algorithm is not effective in general. I will prove that every modified effective algorithm in the holomorphic case yields an effective procedure to prove subellipticity on a wide class of domains with real analytic boundary satisfying a condition slightly stronger than pseudoconvexity.

Monday, October 28 at 4:00 PM in 427 SEO