

**Meeting:** 1000, Albuquerque, New Mexico, SS 2A, Special Session on Several Complex Variables and CR Geometry

1000-32-102      **Andreea C Nicoara\*** (anicoara@math.harvard.edu), Science Center #433, Department of Mathematics, Harvard University, 1 Oxford Street, Cambridge, MA 02138. *Effective Estimates of Subelliptic Gain for the  $\bar{\partial}$ -Neumann Problem*. Preliminary report.

In his Acta Mathematica paper of 1979, J.J. Kohn described an algorithm for determining whether on a domain in  $C^n$  the operator  $\square$  is subelliptic in the context of the  $\bar{\partial}$ -Neumann problem. I shall describe a version of this algorithm that gives an effective bound for the subelliptic gain of  $\square$  on a domain of finite D'Angelo-Catlin type of the form

$$r = \Re\{z_n\} + \sum_{j=1}^N |f_j(z_1, \dots, z_{n-1})|^2,$$

where  $N \geq n$  and each  $f_j$  is a holomorphic function. This is joint work with Izzet Coskun of M.I.I and Gordon Heier of Bochum University and Harvard University. (Received August 19, 2004)