

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

1000-32-93            **Emil J. Straube\*** ([straube@math.tamu.edu](mailto:straube@math.tamu.edu)), Department of Mathematics, Texas A&M University, College Station, TX 77843. *A new compactness property in the theory of the  $\bar{\partial}$ -Neumann problem.* Preliminary report.

We present a unified theory of global regularity in the  $\bar{\partial}$ -Neumann problem that covers both the approach via compactness of the  $\bar{\partial}$ -Neumann operator  $N$  due to Kohn-Nirenberg and Catlin and the approach via vector fields which commute approximately with  $\bar{\partial}$  due to Boas and the author. As a special case, an interesting new compactness property much weaker than compactness of  $N$  emerges, which is still sufficient to give global regularity. (Received August 18, 2004)