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Mehmet Celik* (celik@math.tamu.edu), Mathematics Department, Milner Bldg., College Station, TX 77843. *Compactness of the $\bar{\partial}$ -Neumann operator.*

Solving the inhomogeneous Cauchy-Riemann equations, $\bar{\partial}v = u$, is a fundamental problem in Several Complex Variables. One of the ways to obtain a solution is through inverting the complex Laplacian. Properties of the $\bar{\partial}$ -Neumann operator (the inverse of the complex Laplacian) are determined by the interplay between the complex geometry of \mathbb{C}^n and the geometry of the boundary of a domain. (Received September 15, 2007)