On $\bar{\partial}$-Neumann Problem

Abstract

Let $\Omega \subset\subset \mathbb{C}^{n+1}$ be a bounded, pseudoconvex domain of finite type with smooth boundary. We assume further that the Levi form of $\partial\Omega$ is diagonalizable. In this article, we give detailed discussion of recent progress of the $\bar{\partial}$-Neumann problem. Using this result, we obtain solving operator for inhomogeneous Cauchy-Riemann equation $\bar{\partial}U = f$ in Ω. Here $f = \sum_{j=1}^{n+1} f_j \bar{\omega}$ is a given $(0,1)$-form. Then we discuss the "possible" optimal estimates of the solution.