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

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Let Ω be a bounded domain in $\mathbb{C}^{n+1}$ with smooth boundary. One the the basic problem in several complex variable is solving inhomogeneous Cauchy-Riemann problem in a bounded in Ω. The solvability of this problem depends on the geometry of the domain. Moreover, the solutions are not unique. It is interesting to find a "good solution" (which means smooth such that perpendicular all holomorphic funcitons). In this talk, we construct a parametrix for the solving operator of this problem. Sharp estimates are therefore obtained.