

Title: Global regularity for the Bergman projection on forms

Abstract: Let Ω be a smoothly bounded domain in \mathbb{C}^n . Suppose Ω has a smooth defining function, such that the sum of any j eigenvalues of its complex Hessian is non-negative on $\bar{\Omega}$. We show that this condition implies global regularity of the Bergman projection on $(0, q)$ -forms for $j-1 \leq q \leq n$. This, in some sense, extends the result by Boas and Straube, that global regularity of all Bergman projections follows, if Ω admits a smooth defining function which is plurisubharmonic on the boundary of Ω . However, our method of proof differs considerably. This is joint work with J.D. McNeal.