

Hartogs theorem for forms: solvability of Cauchy-Riemann operator at critical degree

CHIN-HUEI CHANG AND HSUAN-PEI LEE

Abstract. The Hartogs Theorem for holomorphic functions is generalized in two settings: a CR version (Theorem 1.2) and a corresponding theorem based on it for C^k $\bar{\partial}$ -closed forms at the critical degree, $0 \leq k \leq \infty$ (Theorem 1.1). Part of Frenkel's lemma in C^k category is also proved.

Mathematics Subject Classification (2000): 32A26 (primary); 32W10 (secondary).