



Mathematics > Complex Variables

\mathbb{C}^{∞} -hypoellipticity and extension of \mathcal{CR} functions

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Let M be a \mathcal{CR} submanifold of a complex manifold X . The main result of this article is to show that \mathcal{CR} -hypoellipticity at $p_0 \in M$ is necessary and sufficient for holomorphic extension of all germs of \mathcal{CR} functions to an ambient neighborhood in X . As an application, we obtain that \mathcal{CR} -hypoellipticity implies the existence of generic embeddings and prove holomorphic extension for a large class of \mathcal{CR} manifolds satisfying a higher order Levi pseudoconcavity condition.

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