
Given a finite dimensional vector space $Z$ of holomorphic functions on an open subset $U \subset \mathbb{C}^n$, we define a projector from the algebra $O_b$ of holomorphic functions at $b \in U$ onto the space $Z_b \subset O_b$ of germs of elements of $Z$ at $b$. First we prove that $Z_b$ has a structure of factor algebra of $O_b$ at a general point $b$. Using this projector, we define the Taylor expansion of order $d$ for the functions on an embedded submanifold $X \subset \mathbb{C}^m$ at a general point. These generalise the results of Bos and Calvi on an plane algebraic curve. To show this, we need a special kind of higher order tangent space of $X$. The growth of this space with respect to the order measures local simplicity of the embedding. We obtain a zero-estimate formula for analytic functions. This implies that $X$ is embedded in $\mathbb{C}^m$ in not highly transcendental manner excepting points of a set of Lebesgue measure 0 in $X$.

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