A SIMPLE PROOF OF THE OHSAWA-TAKEGOSHI EXTENSION THEOREM

The talk is based on the paper [1]. The aim is to prove the following:

Theorem 1. *Let Ω be a bounded pseudoconvex domain in $\mathbb{C}^n$. Suppose $\sup_\Omega |z_n|^2 < e^{-1}$. Then there exists a constant $C > 0$ such that for every $\varphi \in PSH(\Omega)$, every holomorphic function f on $\Omega \cap \{z_n = 0\}$ with $\int_{\Omega\cap\{z_n=0\}} |f|^2 e^{-\varphi} < \infty$, there exists a holomorphic extension F of f on Ω such that*

$$\int_\Omega \frac{|F|^2}{|z_n|^2(-\log|z_n|)^2} e^{-\varphi} \leq C \int_{\Omega\cap\{z_n=0\}} |f|^2 e^{-\varphi}.$$

References

[1] Bo-Yong Chen, *A simple proof of the Ohsawa-Takegoshi extension theorem*, arXiv:1105.2430v1, 12 May 2011.