

Equivalence between VMO functions and Zero Lelong number functions

Jujie Wu

(Sun Yat-sen University)

Abstract: We prove that a plurisubharmonic function on a domain Ω in \mathbb{C}^n is a locally VMO (Vanishing Mean Oscillation) function if and only if its Lelong number at each point of Ω vanishes. We also give a global version of this result when the boundary of the domain Ω satisfies the *interior sphere condition*. Those equivalences contribute to a better understanding of the behavior of singular plurisubharmonic functions.