

Diederich-Fornaess exponent in non smooth domains and the Ohsawa conjecture (based on papers by P. Harrington and T. Ohsawa-N. Sibony)

Let Ω be a pseudoconvex domain in \mathbb{C}^n with Lipschitz boundary. A theorem due to Harrington is presented which states that there exists a bounded plurisubharmonic exhaustion function which decays near the boundary like $-(\text{dist}(z, \partial\Omega))^\eta$ for some small positive exponent η dependent on Ω . The theorem generalizes results of Diederich-Fornaess and Demailly. The corresponding result for pseudoconvex domains in complex projective spaces is unknown and the very existence of bounded exhaustion functions is an open question due to Ohsawa.