

Comparison of the real and the complex Green functions, and sharp estimates of the Kobayashi distance

NIKOLAI NIKOLOV AND PASCAL J. THOMAS

Abstract. We extend the upper estimates obtained by M. Carlehed [2] and B.-Y. Chen [3] about the ratio of the classical and pluricomplex Green functions to the case of C^2 -smooth locally \mathbb{C} -convexifiable domains of finite type. We also give some lower estimates. In order to obtain these results, and because it is of independent interest, we refine and unify some classical estimates about the Kobayashi distance and the Lempert function in such domains.

Mathematics Subject Classification (2010): 32F45 (primary); 32U45 (secondary).