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The Pluricomplex Poisson Kernel for strictly pseudo convex domains

Abstract

In previous papers in Bracci-Patrizio, and later Bracci-Patrizio and my self we defined the pluricomplex Poisson kernel for strictly convex smoothly bounded domains in \mathbb{C}^n . This kernel generalises many properties of the usual Poisson Kernel for the unit disk, as the relation between Poisson kernel and Green function, and the reproducing formula. In this talk I will describe the Pluricomplex Poisson kernel for bounded strictly pseudoconvex domains in \mathbb{C}^n . The main point is that in the strictly pseudoconvex case the Lempert theory of complex geodesics is no longer available, to define the kernel we then need some local and global approximations of our pseudo convex domain by convex ones.