INVARIANT MEAN VALUE PROPERTY AND THE ASSOCIATED INTEGRAL EQUATIONS[*]

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Abstract

In this paper we consider a class of integral equations associated with the invariant mean value property for $\mathcal{M}$-harmonic functions. We have shown that nonconstant solutions of the integral equations are functions of unbounded variation and do not attain their supremum or infimum on $[0, 1)$. We also discuss in detail the behavior of the kernel of the corresponding integral operator and obtained certain growth estimates of the integral operator.

MSC: 31B05,31B10,45B05,65R20

keywords: Bergman space, Berezin transform, $\mathcal{M}$-harmonic functions, mean-value property, integral equations.

1 Introduction

Let $\mathbb{B}_n$ be the open unit ball of $\mathbb{C}^n$, $n \in \mathbb{N}$, with respect to the Euclidean metric. The group of all one-to-one holomorphic maps of $\mathbb{B}_n$ onto $\mathbb{B}_n$ (the