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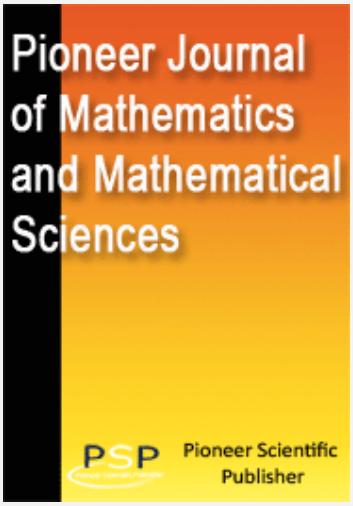

THE HADAMARD PRODUCT OF ANALYTIC FUNCTIONS

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Abstract

Let $C^{(1)}(\overline{\mathbb{D}})$ denote the vector space of complex-valued functions which are continuous on the closed unit disk $\overline{\mathbb{D}} = \{z \in \mathbb{C} : |z| \leq 1\}$ and which have first order derivatives in $\mathbb{D}$ which can be extended to functions continuous on $\overline{\mathbb{D}}$. We prove that $C^{(1)}(\overline{\mathbb{D}})$ is a Banach algebra with multiplication as Hadamard product and we describe its maximal ideal space.

Keywords and phrases: Hadamard product, Banach algebra, maximal ideal, bounded analytic functions.