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FEKETE-SZEGÖ INEQUALITY FOR ANALYTIC AND BI-UNIVALENT FUNCTIONS RELATED WITH HORADAM POLYNOMIALS

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Abstract: In this research article, by making use of Sălăgean differential operator, we introduce and investigate a new subclass of analytic and bi-univalent functions using the Horadam polynomial. We derive the coefficient estimate and obtain Fekete-Szegö inequality for functions in this subclass.

Keywords and Phrases: Sălăgean differential operator, Horadam polynomials, coefficient estimates, Fekete-Szegö inequality.

2020 Mathematics Subject Classification: 30C45, 30C50.

1. Introduction

Let $\mathcal{A}$ denote the class of all analytic functions f defined on the open unit disk $\mathbb{U} = \{z \in \mathbb{C} : |z| < 1\}$, which is normalized under the condition $f(0) = f'(0) = 1$ having the Taylor series expansion

$$f(z) = z + \sum_{n=2}^{\infty} a_n z^n, \ z \in \mathbb{U}. \tag{1.1}$$