# FEKETE-SZEGÖ TYPE COEFFICIENT INEQUALITIES FOR CERTAIN SUBCLASSES OF ANALYTIC FUNCTIONS

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**Abstract:** In the present investigation, the authors obtain Fekete-Szegö inequality for certain subclasses of analytic functions on the open unit disk. For these classes, the Fekete-Szegö type defined through fractional derivatives is obtained.

**Keywords and Phrases:** Univalent functions, starlike functions, convex functions, subordination, Fekete-Szegö inequalities.

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## 1. Introduction

Let $\mathcal{M}$ denote the class of all analytic functions which are analytic in the unit disk $\Delta = \{z : z \in \mathbb{C}, \ |z| < 1\}$ of the form

$$f(z) = z + \sum_{j \geq 2} a_j z^j, \tag{1.1}$$

and $\mathcal{S}$ be the subclass of $\mathcal{M}$ consisting of univalent functions. Let $\Phi(z)$ be an analytic function with positive real part on $\Delta$ with $\Phi(0) = 1$, $\Phi'(0) > 0$ and $Re \ \Phi(z) > 0 \ (z \in \Delta)$ which maps the unit disc $\Delta$ onto a starlike region with