journal of inequalities in pure and applied mathematics
issn: 1443-5756

Volume 6, Issue 3, Article 71

On the Fekete-Szegö Problem for Some Subclasses of Analytic Functions

Authors: T.N. Shanmugam, S. Sivasubramanian,

Keywords: Analytic functions, Starlike functions, Subordination, Coefficient problem, Fekete-Szegö inequality

Date Received: 12/05/05

Date Accepted: 24/05/05

Subject Codes: Primary 30C45

Editors: Saburou Saitoh,

Abstract: In this present investigation, the authors obtain Fekete-Szegö's inequality for certain normalized analytic functions $f(z)$ defined on the open unit disk for which $\frac{zf'(z)+\alpha z^2 f''(z)}{(1-\alpha)f(z)+\alpha z f'(z)}$ $(\alpha \geq 0)$ lies in a region starlike with respect to 1 and is symmetric with respect to the real axis. Also certain applications of the main result for a class of functions defined by convolution are given. As a special case of this result, Fekete-Szegö's inequality for a class of functions defined through fractional derivatives is obtained. The Motivation of this paper is to give a generalization of the Fekete-Szegö inequalities obtained by Srivastava and Mishra .