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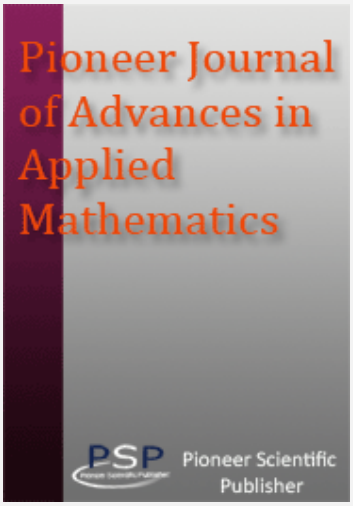

FEKETE-SZEGÖ FUNCTIONAL FOR SOME SUBCLASS OF NON-BAZILEVIČ FUNCTIONS

Lifeng Guo, Yi Ling and Gejun Bao

Abstract

In this present investigation, the authors obtain a sharp Fekete-Szegös inequality for certain normalized analytic functions $f(z)$ defined on the open unit disk for which

$$(1+\beta)\left(\frac{z}{f(z)}\right)^{\alpha} - \beta\frac{zf'(z)}{f(z)}\left(\frac{z}{f(z)}\right)^{\alpha}, \quad (\beta \in \mathbb{C},\ 0 < \alpha < 1)$$

lies in a region starlike with respect to 1 and is symmetric with respect to the real axis. Also, certain applications of our results for a class of functions defined by convolution are given. As a special case of this result, Fekete-Szegös inequality for a class of functions defined through fractional derivatives is also obtained.

Keywords and phrases: non-Bazilevic functions, subordination, Fekete-Szegö inequality.