
THE FEKETE-SZEGÖ INEQUALITY FOR THE SUBCLASSES OF ANALYTIC FUNCTIONS RELATED WITH AN INTEGRAL OPERATOR

Sercan KAZIMOĞLU¹, Erhan DENİZ¹, Adem KIZILTEPE^{1*}

¹*Department of Mathematics, Faculty of Science and Letters, Kafkas University, Kars, Türkiye*

ABSTRACT

Starlike and convex functions occupy a central position in the theory of analytic functions, and coefficient inequalities associated with these classes play a crucial role in understanding their geometric behavior. In this study, Fekete–Szegő type coefficient inequalities are established for classes of starlike and convex functions of complex order. Moreover, several corollaries are derived for particular choices of the parameters.

Keywords Analytic functions · Komatu integral operator · Fekete-Szegő inequality

References

- [1] Deniz E., Orhan H., The Fekete-Szegő problem for a generalized subclass of analytic functions, Kyungpook Math. J. 50, 37-47, 2010.
- [2] Fekete M., Szegő G., Eine Bemerkung über ungerade schlichte Funktionen, J. London Math. Soc., 8, 85–89, 1933.
- [3] Komatu Y., On analytical prolongation of a family of operators, Mathematica (cluj), 32, 141–145, 1990.
- [4] Nasr M.A., Aouf M.K., On convex functions of complex order, Mansoura Sci. Bull. 565-582, 1982.
- [5] Nasr M.A., Aouf M.K., Starlike function of complex order, J. Natur. Sci. Math. 25, 1-12, 1985.
- [6] Wiatrowski P., The coefficients of a certain family of holomorphic functions, Univ. Lodzk. Nauk. Math. Przyrod. Ser. II, Zeszyt, 39, 75–85, 1971.

*Corresponding Author's E-mail: admzkzlt@gmail.com