

## A CLASS OF BAZILEVIC TYPE FUNCTIONS DEFINED BY CONVOLUTION OPERATOR

MOHSAN RAZA AND KHALIDA INAYAT NOOR

*Abstract.* The aim of this paper is to define and study a class of analytic functions related to Bazilevic type functions in the open unit disc. This class is defined by using a convolution operator and the concept of bounded radius rotation of order  $\rho$ . A necessary condition, inclusion result, arc length and some other interesting properties of this class of functions are investigated.

*Mathematics subject classification (2010):* 30C45, 30C50.

*Keywords and phrases:* Bazilevic functions, bounded radius rotations, convolution.

### REFERENCES

- [1] I. E. BAZILEVIC, *On a class of integrability in quadratures of the Löwner-Kufarev equation*, Math. Sb. **37** (1955), 471–476.
- [2] D. A. BRANNAN, *On functions of bounded boundary rotation*, Proc. Edin. Math. Soc. **2** (1968-1969), 339–347.
- [3] A. W. GOODMAN, *On close-to-convex functions of higher order*, Ann. univ. Sci. Budapest. Eötvös. Sect. Math. **15** (1972), 17–30.
- [4] W. K. HAYMAN, *On functions with positive real part*, J. London Math. Soc. **36** (1961), 34–48.
- [5] W. KAPLAN, *Close-to-convex Schlicht functions*, Mich. Math. J. **1** (1952), 169–185.
- [6] K. I. NOOR, *Hankel determinant problem for functions of bounded boundary rotation*, Rev. Roum. Math. Pures Appl. **28** (1983), 731–739.
- [7] K. I. NOOR, *On subclasses of close-to-convex functions of higher order*, Int. J. Math. and Math. Sci. **6**, 2 (1983), 327–334.
- [8] K. S. PADMANABHAN AND R. PARVATHAM, *Properties of a class of functions with bounded boundary rotation*, Ann. Polon. Math. **31** (1975), 311–323.
- [9] R. PARVATHAM AND S. RADHA, *On certain classes of analytic functions*, Ann. Polon. Math. **49** (1988), 31–34.
- [10] B. PINCHUK, *Functions of bounded boundary rotation*, Isr. J. Math. **10** (1971), 6–16.
- [11] CH. POMMERENKE, *On starlike and close-to-convex analytic functions*, Proc. Lond. Math. Soc. **13** (1963), 290–304.