

THE LOGARITHMIC COEFFICIENT INEQUALITY FOR CLOSE-TO-CONVEX FUNCTIONS OF COMPLEX ORDER

MURAT ÇAĞLAR

Abstract. We prove that if $n \geq 2$ for each close-to-convex functions of complex order b in \mathcal{S} whose n -th logarithmic coefficients γ_n satisfies $|\gamma_n| \leq An^{-1} \log n$, where A is an absolute constant.

Mathematics subject classification (2010): 30C45.

Keywords and phrases: Close-to-convex functions, logarithmic coefficients, starlike functions.

REFERENCES

- [1] M. K. AOUF, AND M. A. NASR, *Starlike functions of complex order b* , J. Natural Sci. Math. **25** (1) (1985), 1–12.
- [2] H. S. AL-AMIRI, S. AND FERNANDO, *On close-to-convex functions of complex order*, J. Math. & Math. Sci. Vol. **13**, No. 2 (1990), 321–330.
- [3] J. ANDERSON, K. BARTH, AND D. BRANNAN, *Research problems in complex analysis*, Bull. London Math. Soc. **9** (1977), 129–162.
- [4] Q. DENG, *On circularly symmetric functions*, Appl. Math. Lett. **23** (2010), 1483–1488.
- [5] Q. DENG, *On the logarithmic coefficients of Bazilevic functions*, Appl. Math. Comput. **217** (2011), 5889–5894.
- [6] P. DUREN, *Coefficients of univalent functions*, Bull. Amer. Math. Soc. **83** (5) (1977), 891–911.
- [7] P. L. DUREN, *Univalent Functions*, Springer-Verlag, New York, 1983.
- [8] P. DUREN, Y. LEUNG, *Logarithmic coefficients of univalent functions*, J. Analyse Math. **36** (1979), 36–43.
- [9] M. M. ELHOSH, *On the logarithmic coefficients of close-to-convex functions*, J. Austral. Math. Soc. (Ser. A) **60** (1996), 1–6.
- [10] D. GIRELA, *Logarithmic coefficients of univalent functions*, Annales. Acad. Sci. Fen. Math. **25** (2000), 337–350.
- [11] N. A. LEBEDEV, *Applications of area principle to problems on nonoverlapping domains*, Trudy Mat. Inst. Steklov, **60** (1961), 211–231 (in Russian).
- [12] K. PEARCE, *Review of [9]*, Math. Reviews, info review no. 96j: 30013, 1996.
- [13] CH. POMMERENKE, *Univalent Functions*, Vandenhoeck and Ruprecht, Göttingen, 1975.
- [14] Z. YE, *The logarithmic coefficients of close-to-convex functions*, Bulletin of the Institute of Mathematics Academia Sinica (New Series) **3** (3) (2008), 445–452.
- [15] Z. YE, *The coefficients of Bazilevic functions*, Complex Variables and Elliptic Equations, **58** (11) (2013), 1559–1567.