ON STRONGLY CLOSE-TO-CONVEX FUNCTIONS

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Abstract. Let $K(\beta)$ denote the class of normalized analytic strongly close-to- convex functions of order $\beta \geq 0$ defined in the unit disc E. It is shown that this class is closed under convolution with convex univalent functions. We study the mapping properties of the functions in $K(\beta)$ under certain integral and differential operators. The problem of radius of convexity is also solved.

MSC 2000. 30C45.

Key words. Close-to-convex, Hadamard product, convex, starlike, univalent.

REFERENCES

[1] BERNARD, R. AND KELLOGG, C., *Application of convolution operators to problems in univalent function theory*, Michigan Math. J. **27** (1980), 81-94.

[2] GOODMAN, A.W., *On close-to-convex functions of a higher order*, Ann. Univ. Sci. Budapest Eötöus Sect. Math. **25** (1972), 17-30.

[3] MA, W. AND MINDA, D., *Euclidean linear invariance and uniform local convexity*, J. Austral. Math. Soc. Ser. A. **52** (1992), 401-418.

[4] POMMERENKE, CH., *On close-to-convex analytic functions*, Trans. Amer. Math. Soc. **114** (1965), 176-186.

[5] RUSHEWEYH, ST. AND SHIEL-SMALL, T., *Hadamard product of schlicht functions and the Polya-Schoenberg conjecture*, Comment. Math. Helv. **48** (1973), 119-133.

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