

On certain subclasses of prestarlike functions ¹

Thomas Rosy, S. Kavitha, Muger Acu and G.Murugusundaramoorthy

Abstract

In the present investigation, we introduce and study interesting properties of a new unified class of pre-starlike functions with negative coefficients in the open unit disk Δ . These properties include growth and distortion, radii of convexity, radii of starlikeness and radii of close to convexity.

2000 Mathematics Subject Classification: 30C45.

Key words and phrases: Analytic function, Prestarlike functions, Convolution product, radii of starlikeness.

References

- [1] O. P. Ahuja and H. Silverman, Convolutions of prestarlike functions, Internat. J. Math. Math. Sci., 6(1), 1983, 59–68.
- [2] M. Darus, A unified treatment of certain subclasses of prestarlike functions, J. Inequal. Appl. 6(5), Art. 132, (2005), pp:1–7.
- [3] J. E. Littlewood, On inequalities in theory of functions, Proc. London Math. Soc., 23 (1925), 481–519.
- [4] S. Owa and O. P. Ahuja, A class of functions defined by using Hadamard product, Hokkaido J. Math., 15(2) (1986), 217–232.

¹Received 16 March, 2009

Accepted for publication (in revised form) 14 April, 2009

- [5] S. Ruscheweyh, New criteria for univalent functions, Proc. Amer. Math. Soc., 49 (1975), 109–115.
- [6] H. Silverman, Univalent functions with negative coefficients, Proc. Amer. Math. Soc., 51 (1975) 109–116.
- [7] H. Silverman, A survey with open problems on univalent functions whose coefficients are negative, Rocky Mt. J. Math., 21 (1991), 1099–1125.
- [8] H. Silverman, Integral means for univalent functions with negative coefficients, Houston J. Math., 23 (1997), 169–174.
- [9] H. Silverman and E. Silvia, Subclasses of prestarlike functions, Math. Japon., 29(6), (1984), 929–935.
- [10] B. A. Uralegaddi and Sarangi, Certain generalization of prestarlike functions with negative coefficients, Ganita, 34 (1983), 99–105.

Thomas Rosy, S. Kavitha

Department of Mathematics
East Tambaram, Chennai-600 059, India
e-mail: thomas.rosy@gmail.com

Mugur Acu

Lucian Blaga University
Department of Mathematics
Str. Dr. I. Ratiu 5-7, 550012 Sibiu, Romania.
e-mail: acu_mugur@yahoo.com

G.Murugusundaramoorthy

School of Science and Humanities
VIT University
Vellore - 632014, India.
e-mail: gmsmoorthy@yahoo.com