A FAMILY OF MEROMORPHIC FUNCTIONS INVOLVING GENERALIZED MITTAG–LEFFLER FUNCTION

Cai-Mei Yan and Jin-Lin Liu

Abstract. We introduce a new family of meromorphic functions defined by the second order differential subordination involving generalized Mittag-Leffler function. Certain convolution properties of the family are discussed.

Mathematics subject classification (2010): 33E12, 30C45.

Keywords and phrases: Meromorphic function, Mittag-Leffler function, subordination, Hadamard product (convolution), convex univalent.

REFERENCES

[1] A. A. Attiya, *Some applications of Mittag-Leffler function in the unit disk*, Filomat **30** (2016), 2075–2081.

[2] D. Bansal and J. K. Prajapat, *Certain geometric properties of the Mittag-Leffler functions*, Complex Var. Elliptic Equ. **61** (2016), 338–350.

[3] M. Grag, P. Manohar and S. L. Kalla, *A Mittag-Leffler-type function of two variables*, Integral Transforms Spec. Funct. **24** (2013), 934–944.

[4] T. H. MacGregor, *Functions whose derivative has a positive real part*, Trans. Amer. Math. Soc. **104** (1962), 532–537.

[5] S. S. Miller and P. T. Mocanu, *Differential subordinations and univalent functions*, Michigan Math. J. **28** (1981), 157–171.

[6] S. Ruscheweyh, *Convolutions in Geometric Function Theory*, Les Presses de 1'Université de Montréal, Montréal, 1982.

[7] R. Singh and S. Singh, *Convolution properties of a class of starlike functions*, Proc. Amer. Math. Soc. **106** (1989), 145–152.

[8] H. M. Srivastava, *Some families of Mittag-Leffler type functions and associated operators of fractional calculus*, TWMS J. Pure Appl. Math. **7** (2016), 123–145.

[9] H. M. Srivastava and D. Bansal, *Close-to-convexity of a certain family of q-Mittag-Leffler functions*, J. Nonlinear Var. Anal. **1** (2017), 61–69.

[10] H. M. Srivastava, B. A. Frasin and V. Pescar, *Univalence of integral operators involving Mittag-Leffler functions*, Appl. Math. Inf. Sci. **11** (2017), 635–641.

[11] H. M. Srivastava and Ž. Tomovski, *Fractional calculus with an integral operator containing a generalized Mittag-Leffler function in the kernal*, Appl. Math. Comput. **211** (2009), 198–210.

[12] L. Yin and L.-G. Huang, *Turán type inequalities for generalized Mittag-Leffler function*, J. Math. Inequal. **13** (2017), 667–672.

© ELEM, Zagreb
Paper JMI-12-71

Journal of Mathematical Inequalities
www.ele-math.com
jmi@ele-math.com