

A Generalized Integral Operator Associated with Functions of Bounded Boundary Rotation ¹

L. Dileep, S. Latha

Abstract

In this paper, we define the subclass $\mathcal{V}_k^\lambda(\beta, \delta, n)$ of analytic functions by using the generalized Al-Oboudi differential operator. We determine certain properties of the integral operator $I_n(f_1, \dots, f_m)$ for the functions belonging to the class $\mathcal{V}_k^\lambda(\beta, \delta, n)$.

2000 Mathematics Subject Classification: 30C45.

Key words and phrases: Bounded boundary rotation, Analytic functions, Convex functions, Generalized integral operator.

References

- [1] J. W. Alexander, *Functions which map the interior of the unit circle upon simple regions*, Ann. of Maths, 17, 1915, 12-22.
- [2] AL-Oboudi, *On univalent functions defined by a generalized Sălăgean operator*, Int. J. Math. Sci., 25-28, 2004, 1429-1436.
- [3] D. Breaz, N. Breaz, *Some convexity properties for a general integral operator*, Journal of Inequalities in Pure and Applied Mathematics, vol. 7, no. 5, article 177, 2006.
- [4] D. Breaz, N. Breaz, *Two integral operators*, Studia Univ. Babeş-Bolyai Math., 47(3), 2002, 13-19.
- [5] D. Breaz, S. Owa, N. Breaz, *A new integral univalent operator*, Acta Univ. Apulensis Math. Inform., 16, 2008, 11-16.

¹Received 03 September, 2009

Accepted for publication (in revised form) 10 February, 2011

- [6] E. J. Moulis, *A generalization of univalent functions with bounded boundary rotation*, Trans. Am. Math. Soc., 174, 369-381.
- [7] E. J. Moulis, *Generalization of the Robertson functions*, Pacific J. Math., 81, 169-174.
- [8] S. Bulut, *Sufficient conditions for univalence of an integral operator defined by Al-Oboudi differential operator*, J. Inequal. Appl., 2008, art. id 957042.
- [9] S. S. Miller, P. T. Mocanu, M. O. Reade, *Starlike integral operator*, Pacific J. Math., 79(1), 1978, 157-168.
- [10] G. S. Sălăgean, *Subclasses of univalent functions*, Lecture Notes in Mathe., Springer - Verlag, 2013, 1983, 362-372.

S. Latha

University of Mysore
Yuvaraja's College
Department of Mathematics
Mysore, India
e-mail: drlatha@gmail.com