ON A CERTAIN SUBCLASS OF ANALYTIC FUNCTIONS DEFINED BY MULTIPLIER TRANSFORMATION

ALB LUPAŞ ALINA

ABSTRACT. In the present paper we define a new operator, by means of convolution product between Ruscheweyh operator and the multiplier transformation $I(m, \lambda, l)$. For functions f belonging to the class A_n we define the differential operator $IR_{\lambda,l}^m : A_n \to A_n$, $IR_{\lambda,l}^m f(z) := (I(m, \lambda, l) * R^m) f(z)$ where $A_n = \{f \in \mathcal{H}(U) : f(z) = z + a_{n+1}z^{n+1} + \dots, z \in U\}$ is the class of normalized analytic functions. We study certain differential subordinations regarding the operator $IR_{\lambda,l}^m$.

REFERENCES

[1] A. Alb Lupaş, *A note on differential subordinations using Sălăgean and Ruscheweyh operators*, ROMAI J., vol. 6, nr. 1(2010), 1–4.

[2] A. Alb Lupaş, *A note on differential subordinations using a generalized Sălăgean operator and Ruscheweyh operator*, Acta Universitatis Apulensis, Proceedings of ICTAMI 2009, Alba Iulia, 29-35.

[3] F.M. Al-Oboudi, *On univalent functions defined by a generalized Sălăgean operator*, Ind. J. Math. Math. Sci., 2004, no.25-28, 1429-1436.

[4] A. Cătaş, *On certain class of p-valent functions defined by new multiplier transformations*, Adriana Catas, Proceedings Book of the International Symposium on Geometric Function Theory and Applications, August 20-24, 2007, TC Istanbul Kultur University, Turkey, 241-250.

[5] S.S. Miller, P.T. Mocanu, *Differential Subordinations. Theory and Applications*, Marcel Dekker Inc., New York, Basel, 2000.

[6] St. Ruscheweyh, *New criteria for univalent functions*, Proc. Amet. Math. Soc., 49(1975), 109-115.

[7] G. St. Sălăgean, *Subclasses of univalent functions*, Lecture Notes in Math., Springer Verlag, Berlin, 1013(1983), 362-372.

DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE, UNIVERSITY OF ORADEA, STR. UNIVERSITATII NR. 1, 410087 ORADEA, ROMANIA
E-mail address: dalb@uoradea.ro