Integral Operators on Some Classes of Meromorphic Close-to-Convex Multivalent Functions

Alina Totoi

Department of Mathematics, Faculty of Science, University "Lucian Blaga" of Sibiu, Str. Dr. Ion Rațiu, nr. 5-7, 550012-Sibiu, Romania totoialina@yahoo.com

Presented by Mostafa Mbekhta

Received December 1, 2011

Abstract: We introduce some new subclasses of the class of meromorphic multivalent functions, which are defined by subordination and superordination using the close-to-convexity condition. In some particular cases, these new subclasses are the well-known classes of meromorphic close-to-convex functions. We establish the conditions such that when we apply a certain integral operator (similar to Bernardi integral operator) to a function which belongs to one of these subclasses, the image we get belongs to a similar class.

Key words: Meromorphic close-to-convex functions, integral operators, subordination, superordination.

AMS Subject Class. (2010): 30C45, 30C80.

References

- [1] M. ACU, Some subclasses of meromorphic functions, *Filomat* **21** (2) (2007), 1–9.
- [2] T. BULBOACĂ, "Differential Subordinations and Superordinations: Recent Results", Casa Cărții de Știința, Cluj-Napoca, 2005.
- [3] S.S. MILLER, P.T. MOCANU, Briot-Bouquet differential equations and differential subordinations, *Complex Var. Theory Appl.* **33** (1-4) (1997), 217–237.
- [4] S.S. MILLER, P.T. MOCANU, "Differential Subordinations. Theory and Applications", Monographs and Textbooks in Pure and Applied Mathematics 225, Marcel Dekker Inc., New York-Basel, 2000.
- [5] S.S. MILLER, P.T. MOCANU, Subordinants of differential superordinations, Complex Var. Theory Appl. 48 (10) (2003), 815–826.
- [6] A. TOTOI, On integral operators of meromorphic functions, Gen. Math. 18 (3) (2010), 91-108.
- [7] A. TOTOI, Integral operators applied on classes of meromorphic functions defined by subordination and superordination, Proceedings of the 23rd Operator Theory Conference, Timişoara, 2010 (accepted).

187