

ON SUM AND PRODUCT THEOREMS RELATED TO RELATIVE L^* -TYPE AND RELATIVE L^* -WEAK TYPE OF ENTIRE FUNCTIONS

SANJIB KUMAR DATTA, TANMAY BISWAS AND AHSANUL HOQUE

Abstract. In this paper we would like to investigate some basic properties of relative L^* -type and relative L^* -weak type of entire functions.

Mathematics subject classification (2010): 30D20, 30D30, 30D35.

Keywords and phrases: Entire functions, relative L^* -order (relative L^* -lower order), relative L^* -type (relative L^* -lower type), relative L^* -weak type, regular relative L^* -growth, Property(A).

REFERENCES

- [1] L. BERNAL, *Orden relativo de crecimiento de funciones enteras*, Collect. Math., **39**, (1988), 209–229.
- [2] S. K. DATTA AND T. BISWAS, *Growth of entire functions based on relative order*, Int. J. Pure Appl. Math., **51**, 1 (2009), 49–58.
- [3] S. K. DATTA, T. BISWAS AND S. BHATTACHARYYA, *Growth analysis of composite entire functions related to slowly changing functions oriented relative order and relative type*, Journal of Complex Analysis, **2014**, Article ID 503719, 8 pages, <http://dx.doi.org/10.1155/2014/503719>.
- [4] S. K. DATTA, T. BISWAS AND P. SEN, *Growth of entire functions from the view point of relative L^* -order*, J. Adv. Res. Appl. Math., **7**, 1 (2015), 74–93, doi: 10.5373/jaram.2072.062914
- [5] W. K. HAYMAN, *Meromorphic functions*, The Clarendon Press, Oxford (1964).
- [6] C. O. KISELMAN, *Order and type as measures of growth for convex or entire functions*, Proc. London Math. Soc., **66**, 3 (1993), 152–186.
- [7] B. K. LAHIRI AND D. BANERJEE, *Generalised relative order of entire functions*, Proc. Nat. Acad. Sci. India, **72**, A (IV) (2002), 351–371.
- [8] D. SOMASUNDARAM AND R. THAMIZHARASI, *A note on the entire functions of L -bounded index and L type*, Indian J. Pure Appl. Math., **19**, 3 (March 1988), 284–293.
- [9] G. VALIRON, *Lectures on the General Theory of Integral Functions*, Chelsea Publishing Company, 1949.