QUASIPERIODICITY OF SOME
TRANSCENDENTAL ENTIRE FUNCTIONS

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Abstract. The main aim of this article is to study the ψ-plus quasiperiodicity of complex differential polynomials, complex difference polynomials of certain types. Some new results about ψ-plus quasiperiodicity are obtained.

REFERENCES

[1] R. G. HALBURD, R. J. KORHONEN AND TOHGE. K, *Holomorphic curves with shift-invariant hyperplane preimages*, Trans. Am. Math. Soc., **366** (8) (2014), 4267–4298.

[2] W. K. HAYMAN, *Meromorphic functions*, Oxford: Clarendon Press, 1964.

[3] M. KOHNO, *Global analysis in linear differential equations*, Mathematics and Its Applications, Dordrecht: Kluwer Academic Publishers, 1999.

[4] Z. LATREUCH AND M. A. ZEMIRNI, *On a theorem of A. and C. Rényi and a conjecture of C. C. Yang concerning periodicity of entire functions*, Analysis Mathematica, **48** (1) (2022), 111–125.

[5] K. LIU, *Meromorphic functions sharing a set with applications to difference equations*, J. Math. Anal. Appl., **359** (1) (2009), 384–393.

[6] K. LIU, X. L. LIU AND L. Z. YANG, *The zero distribution and uniqueness of difference-differential polynomials*, Ann. Pol. Math., **109** (2) (2013), 137–152.

[7] K. LIU, Y. M. WEI AND P. Y. YU, *Generalized Yang's Conjecture on the periodicity of entire functions*, Bull Korean Math. Soc., **57** (5) (2020), 1259–1267.

[8] X. L. LIU, K. LIU, R. KORHONEN AND G. FILIPUK, *Quasiperiodicity of transcendental meromorphic functions*, Acta Math. Sci., Ser. B, Engl. Ed, **44** (1) (2024), 161–172.

[9] X. L. LIU, *The periodicity of transcendental meromorphic functions*, Publications Univ, Eastern Finland, Diss, Forestry and Natural Sci 419, 2021.

[10] X. L. LIU AND R. KORHONEN, *On the periodicity of transcendental entire functions*, Bull. Aust. Math. Soc, **101** (3) (2020), 453–465.

[11] X. L. LIU, R. KORHONEN AND K. LIU, *Variations on a conjecture of C. C. Yang concerning periodicity*, Comput Methods Funct Theory, **22** (1) (2022), 27–33.

[12] Y. LIU AND S. JIANG, *The periodicity on a transcendental entire function with its differential-difference polynomials*, ScienceAsia, **48** (6) (2022), 759–763.

[13] W. R. LÜ AND X. X. ZHANG, *On the periodicity of entire functions*, Result. Math., **75** (4) (2020), 176.

[14] Z. G. REN AND G. Q. DANG, *The periodicity of entire functions with finite order*, J. Math., **2021** (8) (2021), 1–8.

[15] Q. WANG AND P. C. HU, *On zeros and periodicity of entire functions*, Acta Math. Sci., **38** (2) (2018), 209–214.

[16] Y. M. WEI, K. LIU AND X. L. LIU, *The periodicity on a transcendental entire function with its differential polynomials*, Anal. Math., **47** (3) (2021), 695–708.

[17] K. YAMANOI, *The second main theorem for small functions and related problems*, Acta Math., **192** (2) (2004), 225–294.

[18] C. C. Yang and H. X. Yi, *Uniqueness Theory of Meromorphic Functions*, Dordrecht: Kluwer Academic Publishers, 2003.

[19] L. Yang, *Value Distribution Theory*, Berlin: Springer-Verlag, 1993.

[20] M. A. Zemirni, I. Laine and Z. Latreuch, *New Findings on the Periodicity of Entire Functions and Their Differential Polynomials*, Mediterr. J. Math., **20** (3) (2023) 136.

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