

Cao, Ting-Bin

The growth, oscillation and fixed points of solutions of complex linear differential equations in the unit disc. (English) [Zbl 1160.34357](#)

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Summary: We consider the complex differential equations of the form $A_k(z)f^{(k)} + A_{k-1}(z)f^{(k-1)} + \dots + A_1(z)f' + A_0(z)f = F(z)$, where $A_0(\neq 0)$, A_1, \dots, A_k and F are analytic functions in the unit disc $D = \{z \in \mathbb{C} : |z| < 1\}$. Some results on the finite iterated order and the finite iterated convergence exponent of zero points in D of meromorphic (analytic) solutions are obtained. The fixed points of solutions of differential equations are also investigated in this paper.

MSC:

34M10 Oscillation, growth of solutions to ordinary differential equations in the complex domain

30D35 Value distribution of meromorphic functions of one complex variable, Nevanlinna theory

Cited in **1** Review
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Keywords:

differential equation; meromorphic function; order of the growth; convergence exponent of zero points; unit disc

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