Fast Growing Solutions to Linear Differential Equations with Entire Coefficients Having the Same ρ_φ-order

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ABSTRACT: This paper deals with the growth of solutions of a class of higher order linear differential equations

$$f^{(k)} + A_{k-1}(z) f^{(k-1)} + \cdots + A_1(z) f' + A_0(z) f = 0, \ k \geq 2$$

when most coefficients $A_j(z)$ $(j = 0, ..., k-1)$ have the same ρ_φ-order with each other. By using the concept of τ_φ-type, we obtain some results which indicate growth estimate of every non-trivial entire solution of the above equations by the growth estimate of the coefficient $A_0(z)$. We improve and generalize some recent results due to Chyzhykov-Semochko and the author.