

**A STUDY ON GROWTH PROPERTIES OF GENERALISED
ITERATED INTEGRAL FUNCTIONS**

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Abstract: In the present paper we investigate some growth properties of generalised iterated integral functions.

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1. Introduction and Definitions

Let $f(z)$ and $g(z)$ be two integral functions. In [3], $T(r, f)$, $M(r, f)$, $N(r, a, f)$, $\delta(a, f)$, $\delta(a(z), f)$, $\log^+ x$ have their usual meanings in the Nevanlinna theory of meromorphic functions.

After that in [2], Clunie studied some comparative growths of $T(r, fg)$ with $T(r, f)$ and $T(r, g)$ and showed that

$$\lim_{r \rightarrow \infty} \frac{T(r, fg)}{T(r, f)} = \infty \quad \text{and} \quad \lim_{r \rightarrow \infty} \frac{T(r, fg)}{T(r, g)} = \infty,$$

where $f(z)$ and $g(z)$ are transcendental integral functions. In [7], Singh proved some comparative growths of $\log T(r, fg)$ and $T(r, f)$. In [4] Lahiri proved some