

UNIVERSITI TEKNOLOGI MARA

TECHNICAL REPORT

**COEFFICIENT INEQUALITIES OF CERTAIN CLASS OF
UNIVALENT FUNCTIONS**

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IN ALLAH'S NAME, THE MOST GRACIOUS AND THE MOST MERCIFUL

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ABSTRACT

Geometric function theory is a part of complex analysis that aims to study the geometric properties of certain class of univalent functions. It is not easy task to determining geometric properties since it involves many theorems and the definition. Many classes of functions that can be explore on the study of geometric function. This study focused on defining new generalized subclass of analytic univalent function. However, there are only a few methods that can be used to solve this problem. The Herglotz Representative Theorem method is used to determine geometric properties of this function. We look at the function of Taylor Series, $f(z) = z + \sum_{k=2}^{\infty} a_n z^n$ is analytic in these unit disc $E = \{z : |z| < 1\}$. For $|\beta| < \pi, \cos \beta > \delta, 0 \leq \delta < 1$, let $M(\beta, \delta)$ denotes the group or class of function $g(z) = \frac{2z - z^2}{2}$ for which $\operatorname{Re} \left\{ e^{i\alpha} \frac{2f'(z)}{g(z)} \right\} > \delta$. In particular, new representation theorem, new coefficient bound, new center and radius and new distortion theorem of tilted analytic univalent functions are obtained. Finally, a new result for the class $M(\beta, \delta)$ is produced.