

**COEFFICIENT INEQUALITIES AND DISTORTION BOUNDS  
ASSOCIATED WITH A NEW SUBCLASS OF ANALYTIC  
FUNCTIONS**

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ABSTRACT. Let  $\mathcal{A}(p, n)$  denote the class of normalized analytic functions  $f(z)$  in the open unit disc,

$$f(z) = z^p + \sum_{k=p+n}^{\infty} a_k z^k, \quad (p, n \in \mathbb{N} := \{1, 2, 3, \dots\}).$$

We consider a new multiplier transformation, namely

$$I_p(\delta, \lambda, l)f(z) := z^p + \sum_{k=p+n}^{\infty} \left[ \frac{p + \lambda(k-p) + l}{p+l} \right]^{\delta} a_k z^k,$$

where  $f \in \mathcal{A}(p, n)$ ,  $\delta, \lambda \in \mathbb{R}$ ,  $\lambda \geq 0$ ,  $\delta \geq 0$ ,  $l \geq 0$ . By making use of the multiplier transformations, a new subclass of  $p$ -valent functions in the open unit disc is introduced. Our main results provide various interesting properties of functions belonging to the new class. Some of these properties include, for example, several coefficient inequalities, distortion bounds and inclusion relationships for the function class which is considered here. Relevant connections of some of the results obtained with those in earlier works are also provided.