

ON A SUBCLASS OF ANALYTIC FUNCTIONS DEFINED BY MULTIPLIER TRANSFORMATIONS

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ABSTRACT. Let $\mathcal{A}(p, n) = \{f \in \mathcal{H}(U) : f(z) = z^p + \sum_{j=p+n}^{\infty} a_j z^j, z \in U\}$, with $\mathcal{A}(1, 1) = \mathcal{A}$. In this paper, we consider multiplier transformations

$$I(m, \lambda, l) f(z) := z + \sum_{j=2}^{\infty} \left(\frac{1 + \lambda(j-1) + l}{l+1} \right)^m a_j z^j,$$

where $m \in \mathbb{N} \cup \{0\}$, $\lambda, l \geq 0$.

By making use of the multiplier transformation we define a new class $\mathcal{BI}(m, \mu, \alpha, \lambda, l)$ involving functions $f \in \mathcal{A}$. Parallel results, for some related classes including the class of starlike and convex functions respectively, are also obtained.

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