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.

References


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