ON A BOUNDED SUBCLASS OF CERTAIN ANALYTIC
FUNCTIONS SATISFYING A DIFFERENTIAL INEQUALITY

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Abstract. In the present paper, using Jack's lemma, the authors investigate the differential inequality

$$\left| (1-\alpha) \frac{I_p(n,\lambda) f(z)}{z^p} + \alpha \frac{I_p(n+1,\lambda) f(z)}{I_p(n,\lambda) f(z)} - 1 \right| < \mu, \ z \in E$$

regarding multivalent functions defined by multiplier transfomation in the open unit disk $E = \{z : |z| < 1\}$. As consequences, sufficient conditions for univalence, starlikeness and strongly starlikeness of certain analytic functions are obtained.

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