UNIVALENCY OF A NONLINEAR INTEGRAL OPERATOR OF ANALYTIC FUNCTIONS

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Abstract. In this paper, we obtain new univalence conditions for the nonlinear integral operator

\[ F_\alpha(p)(z) = \left[ \alpha \int_0^z u^{\alpha-1} \exp \left( \int_0^u B(p(t) - 1) \, dt \right) \, du \right]^{1/\alpha} \]

where \( p(z) \) is analytic function in the open unit disk and satisfies \( p(0) = 1, \alpha \in \mathbb{C} \) with \( \text{Re}(\alpha) > 0 \) and \( B \in \mathbb{C}^* = \mathbb{C} \setminus \{0\} \). The numbers of known or new univalence conditions are shown to follow upon specializing the parameters involved in our main results.


Keywords and phrases: Analytic and univalent functions, integral operator.

REFERENCES
