Goel, R. M.; Mehrok, Beant Singh

A coefficient inequality for a sub-class of close-to-convex functions. (English) Zbl 0723.30015 Serdica 15, No. 4, 327-335 (1989).

Denote by $C(A,B)$ the class of functions

$$f(z) = z + \sum_{k=1}^{\infty} a_k z^k, \quad |z| < 1,$$

such that

$$\frac{zf'(z)}{g(z)} = \frac{1 + A\omega(z)}{1 + B\omega(z)} \quad \text{where} \quad -1 \leq B < A \leq 1,$$

$g$ is a starlike function, $\omega(z) = \sum_{k=1}^{\infty} c_k z^k$ and $|\omega(z)| < 1$.

In this paper, the authors find the upper bound of the functional $|a_3 - \mu a_2^2|$ in the class $C(A,B)$ where $\mu$ is a real number.

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MSC:

30C50 Coefficient problems for univalent and multivalent functions of one complex variable
30C45 Special classes of univalent and multivalent functions of one complex variable (starlike, convex, bounded rotation, etc.)
30C75 Extremal problems for conformal and quasiconformal mappings, other methods