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Double integral operators concerning starlike of order β. (English) Zbl 1201.30015

Int. J. Differ. Equ. 2009, Article ID 737129, 13 p. (2009).

Summary: Double integral operators which were considered by *S. S. Miller* and *P. T. Mocanu* [Integral Transforms Spec. Funct. 19, No. 8, 591–597 (2008; Zbl 1156.30014)] are discussed. In order to show the analytic function $f(z)$ is starlike of order β in the open unit disk $\mathbb{U}$, the theory of differential subordinations for analytic functions is applied. The object of the present paper is to discuss some interesting conditions for $f(z)$ to be starlike of order β in $\mathbb{U}$ concerned with second-order differential inequalities and double integral operators.

MSC:

30C45 Special classes of univalent and multivalent functions of one complex variable (starlike, convex, bounded rotation, etc.)

Full Text: DOI EuDML

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