DIFFERENTIAL SANDWICH THEOREMS USING A GENERALIZED SĂLĂGEAN OPERATOR AND RUSCHEWEYH OPERATOR

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Abstract. In this work we define a new operator using the generalized Sălăgean operator and Ruscheweyh operator. Denote by \( DR_{m,n}^{\lambda} \) the Hadamard product of the generalized Sălăgean operator \( D_{m}^{\lambda} \) and Ruscheweyh operator \( R_{n} \), given by \( DR_{m,n}^{\lambda} : A \rightarrow A \), \( DR_{m,n}^{\lambda} f(z) = (D_{m}^{\lambda} \ast R_{n}) f(z) \) and \( A_{n} = \{ f \in \mathcal{H}(U) : f(z) = z + a_{n+1}z^{n+1} + \ldots, \ z \in U \} \) is the class of normalized analytic functions with \( A_{1} = A \). The purpose of this paper is to derive certain subordination and superordination results involving the operator \( DR_{m,n}^{\lambda} \) and we establish differential sandwich-type theorems.

References


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