

THE GENERALIZED HYPERGEOMETRIC FUNCTION AND ASSOCIATED FAMILIES OF MEROMORPHICALLY MULTIVALENT FUNCTIONS

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Abstract. Making use a linear operator, which is defined here by means of the Hadamard product (or convolution) involving the generalized hypergeometric function, we introduce two novel subclasses $Q_{p,q,s}(\alpha_1; A, B, \lambda)$ and $Q_{p,q,s}^+(\alpha_1; A, B, \lambda)$ of meromorphically multivalent functions of order λ ($0 \leq \lambda < p$) in the punctured disc U^* . In this paper we investigate the various important properties and characteristics of these subclasses of meromorphically multivalent functions. We extend the familiar concept of neighborhoods of analytic functions. We also derive many results for the Hadamard products of functions belonging to the class $Q_{p,q,s}^+(\alpha_1; A, B, \lambda)$.

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