

On boundedness and compactness of a generalized Srivastava-Owa fractional derivative operator

ABSTRACT

The purpose of this present effort is to define a new fractional differential operator $Tz^{\beta, \tau, \gamma}$, involving Srivastava–Owa fractional derivative operator. Further, we investigate some geometric properties such as univalence, starlikeness, convexity for their normalization, we also study boundedness and compactness of analytic and univalent functions on weighted μ -Bloch space for this operator. The method in this study is based on the generalized hypergeometric function.

Keyword: Analytic functions; Univalent functions; Srivastava–Owa fractional derivative operator; Generalized differential operator; Weighted μ -Bloch space; Convolution (or Hadamard product)