Blending type Approximations by Kantorovich variant of α -Schurer operators

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Abstract

In the present manuscript, we present a new sequence of operators, i.e., -Bernstein-Schurer-Kantorovich operators depending on two parameters $2 \in [0; 1]$ and > 0 for one and two variables to approximate measurable functions on $[0; 1+q]$; $q > 0$. Next, we give basic results and discuss the rapidity of convergence and order of approximation for univariate and bivariate of these sequences in their respective sections. Further, Graphical and numerical analysis are presented. Moreover, local and global approximation properties are discussed in terms of first and second order modulus of smoothness, Peetre's K-functional and weight functions for these sequences in different spaces of functions.

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