SOME APPROXIMATION PROPERTIES OF A NONLINEAR
SZÁSZ-MIRAKYAN-DURRMEYER OPERATOR

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Abstract. The present paper concerns with the introduction of a sequence of nonlinear
Szász-Mirakyan-Durrmeyer operators (\(NS_n\)) of the form

\[(NS_n)(f;x) = \int_0^\infty K_n(x,t,f(t))\,dt, \quad x \in [0,\infty), \quad n \in \mathbb{N},\]

acting on bounded functions on every finite subinterval of \([0,\infty)\) where \(K_n(x,t,u)\) satisfies some suitable assumptions. We will also investigate the pointwise convergence of this operators in some functional spaces. This work can be considered as a continuation of the author’s studies about nonlinear operators and their convergence.

References


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