Dedicated to Prof. Juan Nieto on the occasion of his 60th anniversary

Better approximation of functions by genuine Bernstein-Durrmeyer type operators

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ABSTRACT.

The main object of this paper is to construct a new genuine Bernstein-Durrmeyer type operators which have better features than the classical one. Some direct estimates for the modified genuine Bernstein-Durrmeyer operator by means of the first and second modulus of continuity are given. An asymptotic formula for the new operator is proved. Finally, some numerical examples with illustrative graphics have been added to validate the theoretical results and also compare the rate of convergence.

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