

ON CERTAIN BASKAKOV-DURRMAYER TYPE OPERATORS

Asha Ram Gairola

Abstract. This paper is a study of the degree of approximation by the linear combinations of the derivatives of certain Durrmeyer type integral modification of the Baskakov operators in terms of the higher order modulus of smoothness.

[Full text](#)

References

- [1] V. Gupta, *Global approximation by modified Baskakov type operators*, Publ. Mat., Vol 39 (1995), 263-271. [MR1370885](#)(96m:41023). [Zbl 0856.41015](#)
- [2] V. Gupta and G. S. Srivastava, *Approximation by Durrmeyer-type operators*, Ann. Polon. Math. **LXIV** (2), (1996) 153-159. [MR1397587](#)(97g:41031). [Zbl 0876.41018](#)
- [3] V. Gupta, *A note on modified Baskakov type operators*, Approx. Theory Appl. (N.S.) **10** (3), (1994) 74-78. [MR1308840](#)(95k:41033). [Zbl 0823.41021](#)
- [4] V. Gupta, *Rate of convergence by Baskakov-beta operators*, Mathematica **37** (60), (1995), no. 1-2, 109-117. [MR1607845](#)(98m:41036). [Zbl 0885.41017](#)
- [5] E. Hewitt and K. Stromberg, *Real and Abstract Analysis*, McGraw-Hill, New-York, 1969. [MR0367121](#)(51#3363). [Zbl 0225.26001](#).
- [6] S. Li, *Local Smoothness of Functions and Baskakov-Durrmeyer Operators*, J. Approx. Theory **88**, (1997) 139-153. [MR1429969](#)(97m:41023). [Zbl 0872.41008](#)
- [7] Q.-I. Qi and S. S. Guo, *Simultaneous approximation by Baskakov-Durrmeyer operators*, Chinese Quart. J. Math. **16** (1), (2001) 38–45. [MR1862043](#). [Zbl 0983.41011](#)

2010 Mathematics Subject Classification: 41A25, 26A15.

Keywords: Degree of approximation; Modulus of smoothness.

<http://www.utgjiu.ro/math/sma>

- [8] R. P. Sinha, P. N. Agrawal and V. Gupta, *On simultaneous approximation by modified Baskakov operators*, Bull. Soc. Math. Belg. Ser. B **43** (2), (1991) 217–231. [MR1314694](#)(95k:41038).
- [9] A. F. Timan, *Theory of Approximation of Functions of a Real Variable* (English Translation), Dover Publications, Inc., N. Y., 1994. [MR1262128](#)(94j:41001). [Zbl 0117.29001](#).

Asha Ram Gairola
Indian Institute Of Technology Roorkee,
Roorkee (Uttarakhand), India.
e-mail: ashagairola@gmail.com

Surveys in Mathematics and its Applications **5** (2010), 123 – 134
<http://www.utgjiu.ro/math/sma>