A generalized class of integral operators

Vijay Gupta

Abstract.

We introduce in the present note a unified approach to define integral operators, which include many well-known operators viz. Durrmeyer type operators, mixed hybrid operators as special cases. We also obtain the quantitative estimates between the difference of such integral operators with the discrete operators having same and different basis functions. Our operators proposed here give a very large class of integral operators, which have been discussed and proposed by several researchers in past seven decades.

Acknowledgement. The author is thankful to the reviewers for making valuable comments leading to overall improvements in the paper.

References


Received: 19.07.2019; In revised form: 18.05.2020; Accepted: 25.05.2020
2010 Mathematics Subject Classification. 41A25, 41A30.
Key words and phrases. Hybrid operators, generalized Laguerre function, hypergeometric function, convergence, difference of operators.


DEPARTMENT OF MATHEMATICS
NETAJI SUBHAS UNIVERSITY OF TECHNOLOGY
SECTOR 3 DWARKA, NEW DELHI 110078, INDIA
Email address: vijaygupta2001@hotmail.com