On the iterates of Jackson type operator Gs,n in Hilbert space

Teodora Zapryanova, Diko Souroujon Department of Applied Mathematics, Varna University of Economics, Varna, Bulgaria teodorazap@ue-varna.bg

Keywords: Bounded linear operator, limit of iterates, spectral theory, Jackson type operator.

Abstract. In this paper we study the limit of the iterates of Jackson type operator in Hilbert space. The proofs are based on spectral theory of linear operator and functional analysis framework.

References

- C. Badea, Bernstein polynomials and operator theory, Results Math. 53 (3-4) (2009) 229–236.
- [2] J. Cao, H. Gonska, Approximation by Boolean sums of positive linear operators III: estimates for some numerical approximation schemes, Numer. Funct. Anal. Optimiz. 10 (7-8), (1989) 643–672.
- [3] R. DeVore, G. Lorentz, Constructive Approximation, Springer Verlag, Berlin, 1993.
- [4] Ioan Gavrea, Mircea Ivan, On the iterates of positive linear operators, Journal of Approximation Theory 163, (2011) 1076–1079.
- [5] Ioan Gavrea, Mircea Ivan, On the iterates of positive linear operators preserving the affine functions, J. Math. Anal. Appl. 372, (2010) 366– 368.
- [6] J. Nagler, On the spectrum of positive linear operators with partition of unity property, J. Math. Anal. Appl. 425, (2015) 249–258.
- [7] J. Nagler, P. Cerejeiras, B. Forster Lower bounds for approximation with variation-diminishing splines, Journal of Complexity, (2015) 1–11.
- [8] W. Rudin, Functional Analysis, second ed., McGraw-Hill, Inc, New York, 1991.