CORE INVERSE OF OPERATORS IN HILBERT SPACES

PABITRA KUMAR JENA AND BADAL SAHOO

Abstract. This article includes the core inverses of operators on Hilbert spaces. In addition, the group inverses and Moore-Penrose inverses of these operators are characterised.

REFERENCES

[1] P. BOURDON, C. KUBRUSLY, T. LE, D. THOMPSON, *Closed-range posinormal operators and their products*, Linear Algebra Appl., **671** (2023) 38–58.

[2] O. M. BAKSALARY, G. TRENKLERB, *Core inverses of matrices*, Linear Multilinear Algebra, **58** (2010) 681–697.

[3] C. DENG, Y. WEI, Q. XU, *On disjoint range operators in a Hilbert space*, Linear Algebra Appl., **437** (2012) 2366–2385.

[4] Y. N. DOU, G. C. DU, C. F. SHAO, H. K. DU, *Closedness of ranges of upper-trangular operators*, J. Math. Anal. Appl., **356** (2009) 13–20.

[5] H. K. DU, C. Y. DENG, *The representation and characterization of Drazin inverses of operators on a Hilbert space*, Linear Algebra Appl. **407** (2005) 117–124.

[6] J. M. MWANZIA, M. KAVILA, J. M. KHALAGAI, *Moore-Penrose inverses of linear operators in Hilbert space*, Afr. J. Math. Comput. Sci. Res., **15** (2) (2022) 5–13.

[7] D. S. RAKIC, N. C. DINCIC, D. S. DJORDJEVIC, *Core inverse and core partial order of Hilbert space operators*, Appl. Math. Comput., **244** (2014) 283–302.

[8] V. PAVLOVIC, D. S. CVETKOVIC-IIC, *Applications of completions of operator matrices to reverse order law for* {1}*-inverses of operators on Hilbert spaces*, Linear Algebra Appl., **484** (2015) 219–236.

[9] C. WU, J. CHEN, *The 1, 2, 3, 1^m-inverses: A generalization of core inverses for matrices*, Appl. Math. Comput., **427** (2022) 127–149.

[10] S. XU, J. CHEN, J. ITEZ, D. WANG, *Genelalized inverses of matrices*, Miskolc Math., **20** (2019) 565–584.

© ∂MN, Zagreb
Paper OaM-18-33

Operators and Matrices
www.ele-math.com
oam@ele-math.com