

LIFTINGS AND DILATIONS OF COMMUTING SYSTEMS OF LINEAR MAPPINGS ON VECTOR SPACES

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Abstract. We show that each set of commuting linear mappings on a vector space has a lifting consisting of commuting injective mappings and a dilation consisting of commuting bijective mappings.

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REFERENCES

- [1] B. V. R. BHAT, S. DE, N. RAKSHIT, *A caricature of dilation theory*, Adv. Oper. Theory **6** (2021), Paper No. 63, 20.
- [2] K. M. KRISHNA, P. S. JOHNSON, *Dilation of linear maps on vector spaces*, Oper. Matrices **16** (2022), 465–477.
- [3] K. M. KRISHNA, *Algebraic Ando dilation*, arxiv:2210.11310.
- [4] B. SZ.-NAGY, C. FOIAS, *Harmonic Analysis of Operators on Hilbert Spaces*, Translated from the French and revised North-Holland Publishing Co., Amsterdam-London; American Elsevier Publishing Co., Inc., New York; Akadémiai Kiadó, Budapest 1970.