

CANONICAL DECOMPOSITION FOR DISSIPATIVE LINEAR RELATIONS

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Abstract. This work presents two ways of decomposing dissipative linear relations based on the fundamental decompositions for contractions by Sz. Nagy-Foiaş-Langer and von Neumann-Wold. The invariant subspaces for contractions are treated using a minor variation of the Cayley transform. The obtained decompositions allow one to separate the selfadjoint and completely nonselfadjoint parts of a dissipative relation.

Mathematics subject classification (2020): 47A06, 47B44, 47A45, 47A15.

Keywords and phrases: Dissipative linear relations, invariant and reducing subspaces, canonical decomposition.

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