On a decomposition for pairs of operators

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Our aim is to present some result on a decomposition of a pair of operators. More precisely, there are known decompositions of single operators of some classes like decomposition of a contraction (Langer, Nagy, Foias), a isometry (Wold) or a power partial isometry (Halmos, Wallen). For a pair of operators a (joint) decomposition of this type becomes much more complicated (even in case of isometries.) In the presented talk a new decomposition of a pair of commuting, but not necessarily doubly commuting contractions will be proposed. In the case of power partial isometries a more detailed decomposition will be given.

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