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Title: On the Moore–Penrose inverse of a closed linear relation

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For a closed multivalued linear operator T between complex Hilbert spaces the concept of Moore–Penrose inverse of T, denoted $T^\dagger$, is introduced and studied. We prove that if $y \in D(T^\dagger)$, then $T^\dagger y$ is the least square solution of minimal norm of the relation equation $y \in Tx$. We also approximate $T^\dagger$ by a sequence of bounded finite rank operators. Such results generalize the existing results to the case of densely defined closed operators.

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