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On the symmetric solutions of linear matrix equations. (English) [Zbl 0712.15009]

Necessary and sufficient conditions are given for the existence of symmetric solutions of the matrix equations $AX = C$ and $AXB = C$ on the real field, in terms of the singular value decomposition of A and the generalized singular value decomposition of the pair (A, B^T), respectively. Expressions for the general solution are provided for each case.

Reviewer: M.E.Sezer

MSC:

15A24	Matrix equations and identities
15A18	Eigenvalues, singular values, and eigenvectors

Cited in **62** Documents

Keywords:

existence; symmetric solutions; matrix equations; singular value decomposition

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References:

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