ON COMMUTATORS IN MATRIX THEORY

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Abstract. We investigate intertwining relations arising from commutators such as $AB - BA = D$ when $AD = DA$, and $AB - BAT = D$ when $AD = DA^T$, where $A, B$ and $D$ are $n$-by-$n$ matrices. Depending on the properties of $A$, such equations often force $D$ to be zero or at least nilpotent, and it is the properties of $D$ that we investigate. We briefly discuss the situation when $AB + BA = D$, $AD = DAT$ for $A$ normal.


Keywords and phrases: Matrix commutator, nonderogatory matrix, normal matrix.

REFERENCES