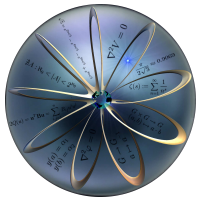

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Schur decomposition

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If A is a complex square matrix of order n *(i.e.* $A \in \mathrm{Mat}_n(\mathbb{C})$*)*, then there exists a unitary matrix $Q \in \mathrm{Mat}_n(\mathbb{C})$ such that

$$Q^H A Q = T = D + N$$

where ^{H} is the conjugate transpose, $D = \mathrm{diag}(\lambda_1, \ldots, \lambda_n)$ *(the* λ_i *are eigenvalues of* A*)*, and $N \in \mathrm{Mat}_n(\mathbb{C})$ is strictly upper triangular matrix. Furthermore, Q can be chosen such that the eigenvalues λ_i appear in any order along the diagonal. [**?**]

References

[GVL] Golub, H. Gene, Van Loan F. Charles: Matrix Computations *(Third Edition)*. The Johns Hopkins University Press, London, 1996.