
Subject: Hermitian Matrices

Posted by [Evilio del Rio](#) on Thu, 29 Jan 1998 08:00:00 GMT

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Hello,

I am trying to get the eigenvalues and eigenvectors of an Hermitian matrix. An hermitian matrix has the property of being its own transpose-conjugate:

$$A = \text{CONJ}(\text{TRANPOSE}(A)) \Rightarrow A[i,j] = \text{CONJ}(A[j,i])$$

In fact, the real-symmetric matrices are just a special case of hermitian and finding eigenvalues and vectors should be as easy as for real-symm., but all the routines in the IDL standard library ask you for real ones (symmetric or not, depending on provedure).

Has anybody implemented an equivalent of EIGENQL (or even ELMHES/HQR/EIGENVEC set)? If not, does anybody know the procedure to reduce a Hermitian matrix to tridiagonal form (with complex arithmetics)?

Many thanks,

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"Anywhere you choose,/ Anyway, you're gonna lose"- Mike Oldfield
