

Changing the Diagonal Term of a Diagonal-Plus-Semiseparable Matrix: How and Why

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We analyze, from both theoretical and algorithmic points of view, orthogonal transformations of a generic diagonal-plus-semiseparable matrix in a different matrix within the same class. This approach may be useful in the context of symmetric eigenvalue problems, tridiagonal generalized eigenvalue problems, and polynomial zero finders, when good initial approximations of the results are available.