

Geršgorin-type localizations of generalized eigenvalues

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SUMMARY

We introduce several localization techniques for the generalized eigenvalues of a matrix pair, obtained via the famous Geršgorin theorem and its generalizations. Specifically, we address the techniques of computing and graphing of the obtained localization sets of a matrix pair. The work that follows involves much about nonnegative matrices, strictly diagonally dominant (SDD) matrices, H - and M -matrices. We show the utility of our results theoretically, as well as with numerical examples and graphs. Copyright © 2009 John Wiley & Sons, Ltd.

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