Gershgorin's circle theorem result

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Since the eigenvalues of A and A transpose are the same, you can get an additional set of discs which has the same centers, a_{ii}, but a radius calculated by the column $\sum_{j \neq i} |a_{ji}|$ (instead of the rows). If a disc is isolated it must contain an eigenvalue. The eigenvalues must lie in the intersection of these circles. Hence, by comparing the row and column discs, the eigenvalues may be located efficiently.