

Pivoting Strategies in the Iterative Methods

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ABSTRACT

In this work is studied the necessity of using pivoting strategies in the iterative methods to solve systems of linear equations, in particular the well-known Jacobi and Gauss-Seidel methods, see [1] and [2]. For these cases, a pivoting strategy is presented, describing some of its main characteristics. We proof that for a matrix of order two, this algorithm generates a matrix of transition whose spectral radius is smaller than one, except for some particular matrix. We present numerical examples, conjectures and open problems.

References

- [1] Golub, G.H. and Van Loan, C.F; **Matrix Computations**, Johns Hopkins,Third Edition, 1996.
 - [2] Higham, N. J.; **Accuracy and Stability of Numerical Algorithms**, SIAM, Philadelphia, 1996.
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Keywords: *Pivoting, iteratives methods*

Mathematics Subject Classification: *34A30*

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