TRANSFER FUNCTIONS AND RESOLVENT NORM APPROXIMATION OF LARGE MATRICES

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Abstract. A unifying framework for methods employed in the approximation of the resolvent norm of nonnormal matrices is presented. This formulation uses specific transfer functions, and it provides new information about the approximation properties of these methods and their application in computing the pseudospectrum of matrices.

Key words. Resolvent norm, transfer function, Arnoldi iteration, pseudospectrum.

AMS subject classification. 65F15.

\(^{1}\)Received February 2, 1998. Accepted for publication July 13, 1998. Recommended by R. Lehoucq. Both authors were supported in part by the European Program INCO-COPERNICUS, project STABLE, Contract nr. 960237.

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