

TRANSFER FUNCTIONS AND RESOLVENT NORM APPROXIMATION OF LARGE MATRICES*

V. SIMONCINI[†] AND E. GALLOPOULOS[‡]

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.

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[†]Istituto di Analisi Numerica - CNR, Pavia, Italy. (val@dragon.ian.pv.cnr.it).

[‡]Department of Computer Engineering and Informatics, University of Patras, Greece. (stratis@hpclab.ceid.upatras.gr)