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POSITIVE DEFINITENESS OF TRIDIAGONAL MATRICES VIA THE NUMERICAL RANGE*

MAO-TING CHIEN† AND MICHAEL NEUMANN‡

Dedicated to Hans Schneider on the occasion of his seventieth birthday.

Abstract. The authors use a recent characterization of the numerical range to obtain several conditions for a symmetric tridiagonal matrix with positive diagonal entries to be positive definite.

Key words. Positive definite, tridiagonal matrices, numerical range, spread

AMS subject classifications. 15A60, 15A57

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†Department of Mathematics, Soochow University, Taipei, Taiwan 11102, Taiwan (mtchien@math.math.scu.edu.tw). Supported in part by the National Science Council of the Republic of China.

‡Department of Mathematics, University of Connecticut, Storrs, Connecticut 06269–3009, USA (neumann@math.uconn.edu).