ON THE POLYNOMIAL NUMERICAL HULL OF A NORMAL MATRIX

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This paper is dedicated to Professor Abbas Salemi

Communicated by F. Zhang

ABSTRACT. Let A be any n-by-n normal matrix and let $k > 0$ be an integer. By using the concept of the joint numerical range $W(A, A^2, \cdots, A^k)$, an analytic description of $V^k(A)$ for normal matrices will be presented. Additionally, new proof for Theorem 2.2 of Davis, Li and Salemi [Linear Algebra Appl., 428 (2008), pp. 137-153] is given.

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