



Banach J. Math. Anal. 5 (2011), no. 1, 88–93

BANACH JOURNAL OF MATHEMATICAL ANALYSIS

ISSN: 1735-8787 (electronic)

www.emis.de/journals/BJMA/

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 $W(A, A^2, \dots, A^k)$, 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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Date: Received: 26 May 2010; Accepted: 4 July 2010.

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2010 *Mathematics Subject Classification.* Primary 15A60; Secondary 15A18, 14H50.

Key words and phrases. Polynomial numerical hull, joint numerical range, polynomial inverse image, normal matrix.