PRESERVERS OF CONDITION SPECTRA AND PSEUDO SPECTRA OF HERMITIAN MATRIX JORDAN PRODUCTS

M. BENDAOUD*, A. BENYOUNESS AND A. CADE

Abstract. Let $\mathcal{H}_n$ be the real space of $n \times n$ complex Hermitian matrices. Complete descriptions are given of the maps of $\mathcal{H}_n$ leaving invariant the pseudo spectral radius or the condition spectral radius of Jordan product of matrices. As application, maps on $\mathcal{H}_n$ that preserve the condition spectrum of Jordan product of matrices are classified.


Keywords and phrases: Condition spectrum, pseudo spectrum, Hermitian matrix, Jordan product, general preserver.

REFERENCES