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

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

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