DENSE SUBSET OF MATRICES HAVING EIGENVALUES AND SINGULAR VALUES WITH MINIMUM NUMBER OF REPETITION

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Abstract. In this paper, we introduce a new class of sets namely analytically imaged sets in the space of $m \times n$ matrices. A sufficient condition is obtained for an analytically imaged subset of the set of all $n \times n$ matrices to have a dense subset in terms of algebraic multiplicities of the eigenvalues. Also, the counterparts of this result have been studied for singular values of rectangular matrices and it has been shown that all the results hold for convex subsets of matrices.

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