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ELA

ON INEQUALITIES INVOLVING THE HADAMARD PRODUCT OF MATRICES*

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Abstract. Recently, the authors established a number of inequalities involving integer powers of the Hadamard product of two positive definite Hermitian matrices. Here these results are extended in two ways. First, the restriction to integer powers is relaxed to include all real numbers not in the open interval $(-1, 1)$. Second, the results are extended to the Hadamard product of any finite number of Hermitian positive definite matrices.

Key words. matrix inequalities, Hadamard product

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