



## A NOTE ON LINEAR PRESERVERS OF SEMIPOSITIVE AND MINIMALLY SEMIPOSITIVE MATRICES\*

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**Abstract.** Semipositive matrices (matrices that map at least one nonnegative vector to a positive vector) and minimally semipositive matrices (semipositive matrices whose no column-deleted submatrix is semipositive) are well studied in matrix theory. In this short note, the structure of linear maps which preserve the set of all semipositive/minimally semipositive matrices is studied. An open problem is solved, and some ambiguities in the article [J. Dorsey, T. Gannon, N. Jacobson, C.R. Johnson and M. Turnansky. Linear preservers of semi-positive matrices. *Linear and Multilinear Algebra*, 64:1853–1862, 2016.] are clarified.

**Key words.** Linear preserver, Semipositive matrix, Minimally semipositive matrix, Monomial matrix.

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