ON THE CONTINUITY OF THE GROUP INVERSE

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Abstract. Let \( \{A_m\}_{m=1}^{\infty} \) be a sequence of complex group invertible matrices that converges to \( A \). We characterize when \( A \) is group invertible and \( \{A^\#_m\}_{m=1}^{\infty} \) converges to \( A^\# \) in terms of the canonical angles between \( A_m \) and \( A_m^* \), where \( X^\# \) denotes the group inverse of the matrix \( X \). We compare this characterization with some known characterizations of the continuity of the Drazin inverse.


Keywords and phrases: Continuity of the group inverse, canonical angles, generalized inverses.

REFERENCES