

Generalizations of Core-Nilpotent Decomposition

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Abstract

Among several decompositions of real or complex matrices, core-nilpotent decomposition is an important one. Core-nilpotent decomposition of a given square matrix is closely related to and characterized by the Drazin inverse. In this talk, we discuss several generalizations of core-nilpotent decomposition with the help of generalized inverses and minus partial order. Furthermore, some generalizations of core-nilpotent decomposition of an element from an associative ring are associated with left (right) π -inverses.

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Keywords

Core-nilpotent decomposition, Generalized core-nilpotent decomposition, Drazin Inverse, π -regular elements.

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