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On the Positive Definite Solutions of Nonlinear Matrix Equation

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Abstract : In this paper, the nonlinear matrix equation is investigated. Based on the fixed-point theory, the boundary and the existence of the solution with the case are discussed. An algorithm that avoids matrix inversion with the case is proposed.

Keywords: Nonlinear matrix equation, Positive definite solution, The maximal-minimal solution, Iterative method, Free-

nversion.

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