

NEW LOWER SOLUTION BOUNDS FOR THE CONTINUOUS ALGEBRAIC RICCATI EQUATION*

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Abstract. In this paper, by constructing the equivalent form of the continuous algebraic Riccati equation (CARE) and applying some matrix inequalities, a new lower bounds solution of the CARE is proposed. Finally, corresponding numerical examples are provided to illustrate the effectiveness of the results.

Key words. Eigenvalue, Continuous algebraic Riccati equation, Matrix bound.

AMS subject classifications. 15A24.

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