

EIGENVALUES OF THE SOLUTION OF THE LYAPUNOV TENSOR EQUATION

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Abstract. The paper is concerned with $H(Z)$ -eigenvalues of the solution of the Lyapunov tensor equation. According to the Lyapunov algebraic theorem on tensors, bounds for $H(Z)$ -eigenvalues of the solution are given firstly, then based on the relationship between the Lyapunov tensor equation and the continuous-time linear uncertain system, conditional inequalities for the asymptotic stability of the system are shown by $H(Z)$ -eigenvalues of the solution of the Lyapunov tensor equation.

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