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Oscillation results for second order matrix differential equations with damping

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Abstract

By using the positive linear functional, including the general means and Riccati technique, some new oscillation criteria are established for the second order matrix differential equations

$$(r(t)P(t)\psi(X(t))K(X(t))) + p(t)R(t)\psi(X(t))K(X(t)) \\ + Q(t)F(X(t))G(X(t)) = 0, t \geq t_0 \geq 0.$$

The results improve and generalize those given in some previous papers, such as Li and Agarwal [1], Yang and Tang [2] and Yang [3, 4].

Key Words: Matrix differential system, Oscillation, Damping term, Wintner type oscillation.

References

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