PROPERTIES OF SOLUTIONS OF THE SCALAR RICCATI EQUATION WITH COMPLEX COEFFICIENTS AND SOME THEIR APPLICATIONS

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Abstract. The definition of normal and extremal solutions of the scalar Riccati equation with complex coefficients is given. Some properties of normal and extremal solutions to Riccati equation are studied. On the basis of the obtained, some theorems which describe the asymptotic behavior of solutions of the system of two linear first order ordinary differential equations are proved (in particular a minimality theorem of a solution of the system of two linear first order ordinary differential equations is proved).


Keywords and phrases: Riccati equation, regular, normal and extremal solutions, global solvability, regular solutions of the system, normal, extremal, super extremal and irreconcilable systems, minimality property.

REFERENCES


