

STABILITY ACCORDING TO LYAPUNOV DYNAMIC SYSTEM WITH SEMI-QUASI-HOMOGENEOUS RIGHT PART

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In this work the stability according to Lyapunov of equilibrium state of differential equation with semi-quasi-homogeneous right part

$$\dot{x} = X(x), x \in R^n, X(0) = 0.$$

is investigated.

The sufficient conditions of asymptotic stability and instability according to Lyapunov depending on indices of quasi-homogeneity of the right part and of the signs of coefficients are obtained.