

# UNIFORM BOUNDEDNESS AND STABILITY OF SOLUTIONS OF A NONLINEAR TWO DIMENSIONAL DIFFERENTIAL SYSTEM

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## Abstract

There are introduced some sufficient conditions for a solution  $(x(t), y(t))$  of the system

$$\begin{aligned}x' &= y \\y' &= -f_1(t, x, y)f_2(x)y - g_1(t, x)g_2(y) - h(t, x, y) - c(t, x, y)\end{aligned}$$

to be uniformly bounded. Also there are found some sufficient conditions for the convergence of all solutions  $(x(t), y(t))$  of the system (1) to be origin as  $t \rightarrow \infty$ .