ON THE EXISTENCE OF A PERIODIC SOLUTION OF THE LIÉNARD SYSTEM WITH IMPULSE EFFECT

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We consider a system of Liénard differential equations with impulse effect

$$\frac{dx}{dt} = z - F(x), \quad \frac{dz}{dt} = -g(x), \quad \text{for} \quad x \neq 0,$$

$$\Delta x = 0, \quad \Delta z = J(z) \quad \text{for} \quad x = 0.$$

Sufficient conditions for the existence of a periodic solution of this system are obtained.

Keywords: systems of differential equations with impulse effect, Liénard system, limit cycle.

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