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Periodic solutions for a kind of Rayleigh equation with a deviating argument. (English)

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Summary: By employing the continuation theorem of coincidence degree theory developed by Mawhin, we study a kind of Rayleigh equation with a deviating argument as follows $x''(t) + f(x'(t)) + g(x(t - \tau(t))) = p(t)$, and some new results on the existence of periodic solutions are obtained. Our work generalizes the known result.

MSC:

34K13 Periodic solutions to functional-differential equations

Cited in 10 Documents

Keywords:

Periodic solution; Deviating argument; Rayleigh equation