

POSITIVE PERIODIC SOLUTIONS OF SECOND ORDER DIFFERENTIAL EQUATIONS WITH NONLINEAR NEUTRAL TERM

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July 12, 2020

Abstract

\begin{abstract} In this work, we discuss the existence of positive periodic solutions of a class of second order nonlinear neutral delay differential equations of the form
$$\begin{aligned} & [u(t)-p(t)f(u(t-\alpha))-q(t)g(u(t-\beta))]'' = -\sigma(t)u(t) + h(t, u(t-\alpha), u(t-\beta)) \\ & \& [u(t)-p(t)f(u(t-\alpha))-q(t)g(u(t-\beta))] = \sigma(t)u(t) - h(t, u(t-\alpha), u(t-\beta)) \end{aligned}$$
 by using Krasnoselskii's fixed point theorem. $\{\text{Mathematics subject classification (2010)}\}$: 34K13, 34A34 $\{\text{Keywords}\}$: Periodic solution, neutral differential equation, delay, nonlinear.\end{abstract}

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