

## INTERVAL OSCILLATION CRITERIA FOR SECOND ORDER MIXED NONLINEAR FORCED IMPULSIVE DIFFERENTIAL EQUATION WITH DAMPING TERM

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*Abstract.* In this paper, interval oscillation criteria are established for second order forced impulsive differential equations with mixed nonlinearities of the form

$$\begin{cases} (r(t)\Phi_\alpha(x'(t)))' + p(t)\Phi_\alpha(x'(t)) + q(t)\Phi_\alpha(x(t)) + \sum_{i=1}^n q_i(t)\Phi_{\beta_i}(x(t)) = e(t), & t \neq \tau_k, \\ x(\tau_k^+) = a_k x(\tau_k), \quad x'(\tau_k^+) = b_k x'(\tau_k), & k = 1, 2, \dots \end{cases}$$

The results obtained in this paper extend some of the existing results and are illustrated by examples.

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