

OSCILLATION OF SECOND ORDER DYNAMIC EQUATIONS WITH MIXED NONLINEARITIES

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Abstract. In this paper, we consider an extension of a result to dynamic equations on time scales originally due to Wong and Yeh for second order ordinary differential equations (Wong and Yeh, *Math. Japonica* **37**(1992), 573-584). As an application, we obtain that the difference equation

$$\Delta^2 x(k) + (-1)^n n^c [x^{\alpha_1}(k+1) + x^{\alpha_2}(k+1)] = 0,$$

where $\alpha_1 \in (0, 1)$, $\alpha_2 \in (1, \infty)$, $c > 0$, is oscillatory.

Keywords. oscillation; superlinear; sublinear; mixed dynamic equation; time scale

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1 References

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