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Philos-type oscillation criteria of second-order generalized Emden-Fowler delay differential equations with a sublinear neutral term. (Chinese. English summary) [Zbl 07403667](#)

Appl. Math., Ser. A (Chin. Ed.) 36, No. 1, 70-82 (2021)

Summary: In this paper, the oscillation of second order generalized Emden-Fowler delay differential equations with a sublinear neutral term is studied. Under the non-canonical condition, by using Riccati transformation and the inequalities technique, several simple new Philos-type and Kamenev-type criteria of this kind of equations to ensure that every solution oscillates are established. These oscillation criteria generalize and improve the classic research results including those adapted to Euler equations established in previous literature. Finally, two application examples are given to show that these oscillation criteria obtained in this paper are effective and convenient.

MSC:

[34K11](#) Oscillation theory of functional-differential equations

[34K40](#) Neutral functional-differential equations

Keywords:

Emden-Fowler equation; Euler equation; second-order delay differential equation; sublinear neutral term; oscillation criterion

Full Text: [DOI](#)