

**Koplatadze, R. G.**

**On monotone and oscillating solutions of  $n$ -th order differential equations with retarded argument.** (Russian) [Zbl 0743.34075](#)

Math. Bohem. 116, No. 3, 296-308 (1991).

The author studies the following  $n$ -th order nonlinear differential equation with delay: (1)  $u^{(n)}(t) + f(t, u(\tau_1(t)), \dots, u(\tau_m(t))) = 0$ , establishing some sufficient conditions under which the equation (1) has no Kneser type solutions. Also some oscillation conditions for (1) are given.

Reviewer: [T.Havarneanu \(Iași\)](#)

**MSC:**

[34K99](#) Functional-differential equations (including equations with delayed, advanced or state-dependent argument)

Cited in **2** Documents

[34C10](#) Oscillation theory, zeros, disconjugacy and comparison theory for ordinary differential equations

[34C11](#) Growth and boundedness of solutions to ordinary differential equations

**Keywords:**

$n$ -th order nonlinear differential equation with delay; Kneser type solutions; oscillation conditions

**Full Text:** [EuDML](#)