

On Oscillatory Properties of Solutions of Functional Differential Equations

Nino Maraneli

In this work the nonlinear differential equation with deviating argument

$$u^{(n)}(t) + p(t)|u(\sigma(t))|^\lambda \operatorname{sign} u(\sigma(t)) = 0,$$

are considered, where

$$\lambda > 0, \quad \lambda \neq 1, \quad p \in C(R_+; R_+), \quad \lim_{t \rightarrow +\infty} \sigma(t) = +\infty,$$

Namely, sufficient (necessary and sufficient) conditions are established for a nonlinear functional differential equations to have Property A.