

[Sugie, J.](#); [Yamaoka, N.](#)

**Comparison theorems for oscillation of second order half-linear differential equations.** (English) [Zbl 1116.34030](#)

[Acta Math. Hung.](#) 111, No. 1-2, 165-179 (2006).

There are established new comparison theorems on the oscillation of solutions of a class of perturbed half-linear differential equation. Connections between half-linear differential equation and linear differential equations are found. The comparison theorems from this work are not of Sturm type or Hill-Wintner type, but the main results are applied in combination with Sturm or Hille-Wintner comparison theorems to the half-linear differential equation of the general form

$$(|x'|^{\alpha-1}x)' + a(t)|x|^{\alpha-1}x = 0$$

Reviewer: [Vasile Marinca \(Timisoara\)](#)

**MSC:**

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

Cited in **1** Review  
Cited in **17** Documents

**Keywords:**

[perturbation](#); [differential inequalities](#)

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