

Iannacci, R.; Nkashama, M. N.

On periodic solutions of forced second order differential equations with a deviating argument. (English) [Zbl 0568.34056](#)

Ordinary and partial differential equations, Proc. 8th Conf., Dundee/Scotl. 1984, Lect. Notes Math. 1151, 224-232 (1985).

[For the entire collection see [Zbl 0564.00005](#).]

Using classical Leray-Schauder's techniques and coincidence degree, we prove the existence of periodic solutions for forced second order delay- differential equations under nonuniform nonresonance conditions with respect to the spectrum of the linear ordinary differential equation with periodicity conditions. Our approach allows us to derive some uniqueness result.

MSC:

- [34K99](#) Functional-differential equations (including equations with delayed, advanced or state-dependent argument) Cited in 4 Documents
- [34C25](#) Periodic solutions to ordinary differential equations
- [34B30](#) Special ordinary differential equations (Mathieu, Hill, Bessel, etc.)
- [47H10](#) Fixed-point theorems
- [47J05](#) Equations involving nonlinear operators (general)

Keywords:

Leray-Schauder's techniques; coincidence degree; forced second order delay-differential equations; nonuniform nonresonance conditions