

Multiplicity results for Hamiltonian systems with Neumann-type boundary conditions

Natnael Gezahegn Mamo

*Department of Mathematics, Informatics and Geoscience
University of Trieste, Trieste, Italy*

natnaelgezahegn.mamo@phd.units.it

A joint work with

Alessandro Fonda, Franco Obersnel, Andrea Sfecci

*Department of Mathematics, Informatics and Geoscience
University of Trieste, Trieste, Italy*

a.fonda@units.it, obersnel@units.it, asfecci@units.it

We prove some multiplicity results for Neumann-type boundary value problems associated with a Hamiltonian system. Such a system can be seen as the weak coupling of two systems, the first of which has some periodicity properties in the Hamiltonian function, the second one presenting the existence of a well-ordered pair of lower/upper solutions.

References

- [1] A. Fonda and R. Ortega, A two-point boundary value problem associated with Hamiltonian systems on a cylinder, *Rend. Circ. Mat. Palermo* 72 (2023), 3931–3947.
- [2] A. Szulkin, A relative category and applications to critical point theory for strongly indefinite functionals, *Nonlinear Anal.* 15 (1990), 725–739.