Periodic solutions of ϕ-Laplacian differential systems: continuation theorems, bound sets, and atypical bifurcation

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We present some recent results about the existence of periodic solutions of vector differential systems involving ϕ-Laplacian operators. We first review the corresponding theorems concerning the linear differential operator, then new continuation theorems are exploited to obtain existence results with "bound set" conditions. At last, we provide atypical bifurcation results in the sense of Prodi–Ambrosetti. All the results rely on topological degree theory. The talk is based on a recent collaborations with Prof. Pierluigi Benevieri (University of São Paulo, Brazil) and Prof. Fabio Zanolin (University of Udine, Italy).

References

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