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17. Control Theory and Optimization

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On some methods in a periodic problem for a functional differential inclusion in a Banach space

We consider a problem of existence of periodic solutions for a system governed by a semilinear functional differential inclusion in a Banach space. The properties of the translation multioperator along the trajectories of the inclusion are studied. On this base application of a new asymptotic fixed point theorem yields the existence of a periodic solution for a dissipative inclusion. The presence of a global compact attractor for the set of solutions is also demonstrated. Part of these results is joint work with P. Zecca.

Reference: V. Obukhovskii and P. Zecca, On some properties of dissipative functional differential inclusions in a Banach space, to appear in Topological Methods of Nonlinear Analysis.