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Title: Periodic problems for functional differential inclusions

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Abstract: In our talk we consider a new methods for the solution of periodic problems for a nonlinear system governed by a functional differential inclusion of the following form:

$$x'(t) \in F(t; x_t).$$

We assume first that the multivalued map F has convex compact values and satisfies Carathéodory conditions. Further we suppose that the multivalued map F is regular and non-convex valued. The class of regular multimaps includes, in particular, bounded almost lower semicontinuous multimaps with compact values and multimaps of Carathéodory type. In both cases we apply the method of generalized integral guiding function for the study of periodic problems.