

Commentary on the habilitation thesis

**Boundary value problems for second-order differential inclusions
on compact and non-compact intervals in the Euclidean and
abstract spaces**

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The thesis is based on papers [1]-[12], all published in indexed international journals.

The thesis is devoted to the study of boundary value problems for second-order differential inclusions. As the title of the thesis indicates, several types of problems are discussed – vector problems on compact or non-compact intervals, problems in Banach spaces and finally also vector problems involving impulses. The key tool that is used in the thesis is an appropriate continuation principle that contains besides other the transversality condition which verification is very complicated. Therefore, the second substantial part of the thesis deals with bound sets technique which can be used as a tool for its guaranteeing.

All articles present collective results which are based on common discussions, shared ideas and detailed computations. Contributions of all coauthors are mostly equivalent. In particular, my contribution to the papers [1], [2], [4] and [6]-[9] is $1/3$, the contribution to papers [3] and [5] is $1/2$, to papers [11] and [12] is my contribution $3/5$ and to the paper [10] is my contribution 1. In all cases, I was involved in all parts of the process, i.e. providing initial observations, delineating conjectures, investigating details, elaborating, extending and collecting partial results, proving the results, computing illustrative examples and also collaborating on the revisions.

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