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A note on the solutions of a second-order evolution inclusion in non separable Banach spaces

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Abstract: We consider a Cauchy problem associated to a second-order evolution inclusion in non separable Banach spaces under Filippov type assumptions and we prove the existence of mild solutions.

Keywords: Lusin measurable multifunctions; differential inclusion; selection

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REFERENCES

- [1] Baliki A., Benchohra M., Graef J.R., *Global existence and stability of second order functional evolution equations with infinite delay*, Electronic J. Qual. Theory Differ. Equations **2016** (2016), no. 23, 1–10.
- [2] Baliki A., Benchohra M., Nieto J.J., *Qualitative analysis of second-order functional evolution equations*, Dynamic Syst. Appl. **24** (2015), 559–572.
- [3] Benchohra M., Medjadj I., *Global existence results for second order neutral functional differential equations with state-dependent delay*, Comment. Math. Univ. Carolin. **57** (2016), 169–183.
- [4] Bressan A., Colombo G., *Extensions and selections of maps with decomposable values*, Studia Math. **90** (1988), 69–86.
- [5] De Blasi F.S., Pianigiani G., *Evolution inclusions in non separable Banach spaces*, Comment. Math. Univ. Carolin. **40** (1999), 227–250.
- [6] Filippov A.F., *Classical solutions of differential equations with multivalued right-hand side*, SIAM J. Control Optim. **5** (1967), 609–621.
- [7] Henriquez H.R., *Existence of solutions of nonautonomous second order functional differential equations with infinite delay*, Nonlinear Anal. **74** (2011), 3333–3352.
- [8] Henriquez H.R., Poblete V., Pozo J.C., *Mild solutions of non-autonomous second order problems with nonlocal initial conditions*, J. Math. Anal. Appl. **412** (2014), 1064–1083.
- [9] Kozak M., *A fundamental solution of a second-order differential equation in a Banach space*, Univ. Iagel. Acta. Math. **32** (1995), 275–289.
- [10] Kuratowski K., Ryll-Nardzewski C., *A general theorem on selectors*, Bull. Acad. Pol. Sci. Math. Astron. Phys. **13** (1965), 397–403.