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A NOTE ON SOME SECOND-ORDER INTEGRO-DIFFERENTIAL INCLUSIONS WITH BOUNDARY CONDITIONS

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Abstract. We study the existence of solutions for two classes of second-order integro-differential inclusions with boundary conditions. We establish Filippov type existence results in the case of nonconvex set-valued maps.

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REFERENCES

[1] Aubin, J.P. and Cellina, A., *Differential Inclusions*, Springer, Berlin, 1984.
[2] Benchohra, M., Nieto, J.J. and Ouahab, A., *Second-order boundary value problem with integral boundary conditions*, Boundary Value Problems, **2011** ID 260309 (2011), 1–9.
[3] Filippov, A.F., *Classical solutions of differential equations with multivalued right hand side*, SIAM J. Control, **5** (1967), 609–621.
[4] Xiao, Y.Z., Cang, Y.H. and Liu, Q.F., *Existence of solutions for a class of boundary value problems of semilinear differential inclusions*, Math. Comput. Modelling, **57** (2013), 671–683.

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