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Delay differential inclusions with constraints. (English summary)

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The results of the paper deal with properties of the solution set to a delay differential inclusion of the form $x'(t) \in F(t, x_t)$ a.e. in $[0, \omega)$. In particular, it is proved that the solution set is an R_δ -set and a periodic solution exists if the system is periodic.

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References

1. N. Aronszajn, *Le corespondant topologique de l'unicité dans la theorie des équations différentielles*, Ann. of Math. **43** (1942), 730-738. [MR0007195](#)
2. J.-P. Aubin and A. Cellina, *Differential inclusions*, Springer-Verlag, Berlin, 1984. [MR0755330](#)
3. F. S. DeBlasi and J. Myjak, *On the solution set for differential inclusions*, Bull. Polish Acad. Sci. **33** (1985), 17-23.
4. S. Eilenberg and D. Montgomery, *Fixed point theorems for multivalued transformations*, Amer. J. Math. **68** (1946), 214-222. [MR0016676](#)
5. E. Flytzanis and N. S. Papageorgiou, *Existence of monotone and slow solutions for differential inclusions*, Internat. J. Systems Sci. **20** (1989), 2241-2249. [MR1031152](#)
6. G. Haddad, *Monotone trajectories of differential inclusions and functional differential inclusions with memory*, Israel J. Math. **39** (1981), 83-100. [MR0617292](#)
7. G. Haddad and J.-M. Lasry, *Periodic solutions of functional differential inclusions and fixed points of σ -selectionable correspondences*, J. Math. Anal. Appl. **96** (1983), 295-312. [MR0719317](#)
8. C. J. Himmelberg, *Measurable relations*, Fund. Math. **87** (1975), 59-71. [MR0367142](#)
9. C. J. Himmelberg and F. S. Van Vleck, *On the topological triviality of the solution sets*, Rocky Mountain J. Math. **10** (1980), 247-252. [MR0573874](#)
10. C. J. Himmelberg and F. S. Van Vleck, *A note on the solution sets of differential inclusions*, Rocky Mountain J. Math. **12** (1982), 621-625. [MR0683856](#)
11. S. Hu and N. S. Papageorgiou, *On the topological regularity of the solution set of differential inclusions with constraints*, J. Differential Equations **107** (1994), 280-289. [MR1264523](#)
12. D. Hyman, *On decreasing sequences of compact absolute retracts*, Fund. Math. **64** (1969), 91-97. [MR0253303](#)
13. M. Kisielewicz, Z. Nowak, and M. Przybybowska, *An approximation theorem for vector valued functions*, Funct. Approx. Comment. Math. **XII** (1982), 55-62. [MR0817307](#)
14. N. S. Papageorgiou, *On measurable multifunctions with applications to random multivalued equations*, Math. Japon. **32** (1987), 437-464. [MR0914749](#)
15. L. Rybinski, *On Carathéodory type selections*, Fund. Math. **125** (1985), 187-193. [MR0813756](#)
16. J. Yorke, *Spaces of solutions*, Lecture Notes in Oper. Res. and Math., vol. 12, Springer-Verlag, Berlin, 1969, pp. 383-403. [MR0361294](#)

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