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On viability for nonautonomous nonconvex differential inclusions

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Abstract - We prove the existence of viable solutions to the Cauchy problem $x' \in F(t, x), x(0) = x_0$ in M , where F is a multifunction and M is a convex locally compact set of a Hilbert space that satisfy $F(t, x) \cap K_x M \cap \partial_F V(x) \neq \emptyset$, with $K_x M$ the contingent cone to M at x and $\partial_F V$ is the Fréchet subdifferential of a ϕ -convex function or order two V .

Key words and phrases : viable solutions, ϕ -convex functions, differential inclusions.

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