JOSÉ ÁNGEL CID

Universidad de Jaén

Solvability of discontinuous systems of ordinary differential equations

Abstract:

We study the existence of solutions in the sense of Carathéodory for systems of first order ordinary differential equations.

We pass from the differential equation to a solvable differential inclusion, and then we look for Carathéodory solutions of our equation among those of the inclusion. To do this the discontinuity sets of the nonlinear part are assumed to satisfy a kind of inverse viability condition.