

# ON A DIFFERENTIAL INCLUSION WITH CERTAIN NONLOCAL CONDITIONS\*

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## Abstract

We consider a first-order nonconvex multivalued differential equation subject to some nonlocal conditions. We establish a Filippov type existence theorem and we prove the arcwise connectedness of the solution set of the problem considered.

MSC: 34A60

**keywords:** differential inclusion, boundary value problem, arcwise connectedness.

## 1 Introduction

This paper is concerned with the following problem

$$x' \in F(t, x) \quad a.e. [0, 1], \quad (1.1)$$

$$x(0) + \sum_{i=1}^m a_i x(t_i) = x_0, \quad (1.2)$$

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