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Feedback equivalence for nonlinear systems and the time optimal control problem. (English)

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A relation between the classification of affine control systems under the action of the feedback group and a classification of a set of constrained Hamiltonian vector fields, arising from Pontryagin's Maximum Principle, for the time optimal control problem is given. The vector fields represent the singularities of the input-state mapping. The proposed relation provides a method to compute feedback invariants.

Reviewer: [B.Cheshankov \(Sofia\)](#)

MSC:

93B52 Feedback control

93C10 Nonlinear systems in control theory

Cited in **15** Documents

Keywords:

affine control systems; Pontryagin's Maximum Principle

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