

Balachandran, K.

Global and local controllability of nonlinear systems. (English) [Zbl 0554.93012](#)
IEE Proc., Part D 132, 14-17 (1985).

Sufficient conditions are established for the global and local controllability of nonlinear systems of the form $\dot{x}(t) = A(t, x(t), \dot{x}(t))x(t) + B(t, x(t), \dot{x}(t))u(t) + f(t, x(t), \dot{x}(t), u(t))$. The results are obtained using the measure of noncompactness of a set and Darbo's fixed point theorem.

MSC:

- [93B05](#) Controllability
- [47H10](#) Fixed-point theorems
- [93C10](#) Nonlinear systems in control theory
- [54H25](#) Fixed-point and coincidence theorems (topological aspects)

Cited in **1** Review
Cited in **9** Documents

Keywords:

global and local controllability; measure of noncompactness; Darbo's fixed point theorem

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