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**Global steady-state stabilization and controllability of 1D semilinear wave equations.** (English) [Zbl 1101.93039](#)

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The authors consider the problem of exact boundary controllability of semilinear wave equation in one-space dimension. The main result asserts that it is possible to move from any steady-state to any other one by means of a boundary control, provided that they are in the same connected component of the set of steady-states. The proof relies on an explicit construction of the control in a feedback form, and of a Lyapunov functional.

Reviewer: [Gheorghe Aniculăesei \(Iași\)](#)

**MSC:**

[93C20](#) Control/observation systems governed by partial differential equations  
[35B37](#) PDE in connection with control problems (MSC2000)

Cited in **17** Documents

**Keywords:**

[wave equation](#); [stabilization](#); [Riesz basis](#); [pole shifting](#); [Lyapunov functional](#)

**Full Text:** [DOI](#)

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