

# Existence and nonexistence of global solutions for a structurally damped wave system with power nonlinearities

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## Abstract

Our interest itself of this paper is strongly inspired from an open problem in the paper published by D'Abbico. In this article, we would like to study the Cauchy problem for a weakly coupled system of semi-linear structurally damped wave equations. The main goal is to find the threshold, which classifies the global (in time) existence of small data solutions or the nonexistence of global solutions under the growth condition of the nonlinearities.

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