

Karlsruher PDE-Seminar

Polynomial decay rate for a wave equation with general acoustic boundary feedback laws

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We consider the stabilization of the wave equation by a general class of acoustic boundary feedback laws at one extremity. This system is not uniformly stable but we furnish sufficient conditions that guarantee a polynomial stability. Our method combines the use of an observability inequality for the associated undamped problem obtained via sharp spectral results with regularity results of the solution of the undamped problem with a specific right-hand side. In some particular cases, the optimality of the decay is shown again with the help of precise spectral results of the operator associated with the damped problem. We finally illustrate our general results by some examples.

Termin: Donnerstag, 7. November 2013, 17:30 Uhr

Ort: 1C-03, Allianz-Gebäude 05.20

Gastgeber: Die Dozenten des Schwerpunkts Partielle Differentialgleichungen