

DECAY ESTIMATES FOR A THERMOELASTIC SYSTEM IN WAVEGUIDES

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ABSTRACT. We study a linearized system of thermoelasticity in an infinite waveguide. This coupled hyperbolic-parabolic system will be treated by a semi-discrete Fourier decomposition and a diagonalization procedure, proving the decay estimates of the solution in the linear case. Then we consider applications to the nonlinear situation.

This is joint work with Yaguang Wang (Shanghai).