

THE GLOBAL ATTRACTOR FOR A CLASS OF HIGHER-ORDER COUPLED KIRCHHOFF-TYPE EQUATIONS WITH STRONG LINEAR DAMPING

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ABSTRACT

The paper investigates the longtime behavior of the initial boundary value problem for a system of coupled wave equations of higher-order Kirchhoff type with strong damping terms. Under the appropriate assumptions, we conclude the existence and uniqueness of solution by a priori estimate. After that, we show that the corresponding continuous solution semigroup possesses a global attractor which is compact by the method of operator semigroup.

Keywords: Higher-order Kirchhoff type; The existence and uniqueness; Priori estimates; Global attractor.

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