

**WAVE EQUATIONS WITH SUPERCRITICAL INTERIOR AND
BOUNDARY SOURCES: GLOBAL EXISTENCE, DECAY RATES,
AND BLOW-UP OF SOLUTIONS**

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ABSTRACT. In this talk we consider a wave equation with supercritical interior and boundary sources. In addition, nonlinear interior and boundary damping terms are present. Under some restrictions on the parameters, we prove the existence and uniqueness of a global solution and obtain exponential and algebraic decay rates of the energy. We also prove a blow up result when the initial energy is nonnegative.

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