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**ON WAVE EQUATIONS WITH INTERIOR AND BOUNDARY
INTERACTIONS BETWEEN SUPERCRITICAL SOURCES AND
DAMPINGS**

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The model considered is the wave equation with Neumann boundary conditions and interior and boundary interactions of supercritical nonlinear sources and dampings. Our aim is to discuss the wellposedness of the system on finite energy space. Since Lopatinski condition fails to hold, the analysis of the nonlinearities supported on the boundary, within the framework of weak solutions, is a subtle issue and involves strong interaction between the source and the damping. We will provide positive answers to the questions of local existence and uniqueness of weak solutions and moreover give complete and sharp description of parameters corresponding to global existence and blow-up of solutions in finite time.

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