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Irena Lasiiecka and **Lorena V Bociu*** (1vb9b@virginia.edu), 1800 Jefferson Park Avenue, Charlottesville, VA 22903. *Local and Global Solutions of Semilinear Wave Equation with Nonlinear Boundary Conditions.*

Our paper studies the wellposedness of a model of semilinear wave equation with nonlinear boundary dissipation and source on a finite energy space. This includes existence and uniqueness of both local and global solutions. The present paper is a continuation and expansion of results in I.Lasiiecka and D. Tataru, Uniform Boundary Stabilization of Semilinear Wave Equations with Nonlinear Boundary Damping (DIE 1993). By using monotone operator theory techniques, we extend the results to incorporate more general dissipation and more general nonlinear functions which are not necessarily dissipative. (Received August 23, 2005)