

First Joint Meeting Brazil Italy of Mathematics  
Special Session: New developments in nonlinear  
evolutionary PDEs

Rio de Janeiro, August 29 - September 02, 2016

**Exponential stability for the wave equation with degenerate nonlocal weak damping**

**M. M. Cavalcanti, V. N. Domingos Cavalcanti, M. A. Jorge Silva and C. M. Webler**

**Abstract:** A damped nonlinear wave equation with a degenerate and nonlocal damping term is considered. Well posedness results are discussed, as well as the exponential stability of the solutions. The degeneracy of the damping term is the novelty of this stability approach.