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Petronela Radu* (pradu@math.unl.edu), Lincoln, NE 68502. *Decay of higher order energies for nonlocal wave equations with damping.*

In this talk I will present some recent results regarding the long time behavior of solutions to nonlocal wave equations with damping. These equations appear as models in nonlocal diffusion, when one uses the Cattaneo-Vernotte flux to replace the Fourier law. Several methods suitable for this investigation will be presented, some which are reminiscent of the local setting, and I will also point out some of the major challenges encountered in the nonlocal case. (Received January 27, 2014)