Nonlinear dissipative lattices: long time behavior and global attractor

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Abstract. We will describe recent results while studying the nature of vibrations which arise in a lattice structure.In many situations a system of point masses in their state of rest have periodic distributions and they have interactions which are coupled in a nonlinear way. We describe recent results on the subject and concentrate our attention on multidimensional nonlinear lattices under the effect of nonlinear damping. This work is in collaboration with J. Morais and J. Oliveira from the Federal University of Santa Catarina (Florianopolis, Brazil).