Turkish Journal of Mathematics

Turkish Journal

of

Mathematics

# FINITE DIMENSIONAL ATTRACTORS FOR A CLASS OF SEMILINEAR WAVE EQUATIONS

A. EDEN, V. KALANTAROV

**Abstract:** In this paper we give a self-contained survey of results related with the global attractors for a class of nonlinear wave equations with damping or viscosity terms. In particular, we prove the existence of a finite dimensional attractor and estimate its fractal dimension by imbedding it in an exponential attractor. Some results on global stability, existence of finite dimensional attractors were already partially discussed in Kalantarov [44] and in Eden et. al. [25], however we simplify the framework by introducing a unified approach to both the existence of attractors through $\alpha$-contractions and the construction of exponential attractors via some Lipschitzianity condition of the non-linear operator.

Keywords
Authors

Turk. J. Math., **20**, (1996), 425-450.
Full text: pdf
Other articles published in the same issue: Turk. J. Math.,vol.20,iss.3.