



CCQCN

CRETE CENTER FOR
QUANTUM COMPLEXITY
AND NANOTECHNOLOGY

ΣΕΜΙΝΑΡΙΟ ΚΕΝΤΡΟΥ ΚΒΑΝΤΙΚΗΣ ΠΟΛΥΠΛΟΚΟΤΗΤΑΣ & ΝΑΝΟΤΕΧΝΟΛΟΓΙΑΣ/
CCQCN SEMINAR

Tuesday, 13 May 2014

11:00-12:00

3rd Floor Seminar Room

Exploration of localization & hopping of vibrational energy in nonlinear lattices

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Abstract

It had been known for some time that nonlinearity and discreteness play important roles in many branches of condensed matter physics as evidenced by the appearance of domain walls, kinks and solitons. A more recent discovery is that localized dynamical energy in a perfect nonlinear lattice can be stabilized by lattice discreteness. Our recent experimental studies demonstrate both the production and manipulation of these intrinsic localized modes (ILMs). Linear response spectra of a driven micromechanical array containing an ILM have been used to explore both the dynamics of bifurcation transitions and the hopping of vibrational energy.

