



ΓΕΝΙΚΟ ΣΕΜΙΝΑΡΙΟ ΤΜΗΜΑΤΟΣ ΦΥΣΙΚΗΣ

PHYSICS COLLOQUIUM

Thursday, 7 October 2010
17:00-18:00

3rd Floor Seminar Room

“Discrete nonlinear Schrödinger equation dynamics in complex networks”

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Abstract

The discrete nonlinear Schrödinger equation (DNLS) is a ubiquitous equation that appears in condensed matter physics, biological physics, BEC, nonlinear optics, etc. Most analytical and numerical work on it so far focuses on simple ordered and disordered lattices. We will review some of the earlier work on DNLS and present recent results in more complex lattices such as small world networks (SWN). We will also analyze the mean field limit of the SWN where analytical results may be obtained.