Mês de: SETEMBRO 2012

SEMINÁRIO DE SISTEMAS DINÂMICOS

Dia 19 de Setembro (quarta-feira), às 15h, na Sala B3-01

Positivity of the Lyapunov exponent for Schrodinger cocycles defined by skew-shift dynamics and large non-analytic potential functions.

Silvius Klein

(Institute of Mathematics 'Simion Stoilow' of the Romanian Academy, Bucharest)

Abstract:

We consider a discrete one-dimensional quasi-periodic Schrodinger operator whose dynamics is defined by the skew-shift map on the 2-dimensional torus and whose potential function belongs to a Gevrey class and satisfies a generic transversality condition. Assuming that the frequency defining the dynamics satisfies a generic Diophantine condition, and that the coupling constant of the system is large enough, we show that the associated Lyapunov exponent is positive and continuous for all energies, with a certain modulus of continuity. Moreover, in the same perturbative regime, we prove Anderson localization for all energies and for most such frequencies. These results extend work done by J. Bourgain, M. Goldstein, W. Schlag from analytic to more general potential functions.

Local:
INSTITUTO PARA A INVESTIGAÇÃO
INTERDISCIPLINAR
Av. Prof. Gama Pinto, 2
1649-003 Lisboa

HOSP.
SANTA
MARIA

Av. Prof. Gama Pinto

Entrada

ENTRECAMPOS