



Avviso di Seminario

Venerdì 10 Giugno 2005 alle ore 11.00

presso l' Aula A02

del Dipartimento di Fisica e Tecnologie Relative

Viale delle Scienze, Edificio 18, Palermo

il

Dr. Vianney Desoutter

del Laboratoire de Physique Theorique IRSAMC

Universite Paul Sabatier, Toulouse (France)

terrà un seminario dal titolo:

*Dynamical systems controlled by entropic phenomena:
a “toy-model” of out-of-equilibrium systems*

Abstract

Glassy systems present a very rich phenomenology. In particular, they present a very large relaxing time as compared to experimental times. Thus they are seen in quasi-stationary states whose properties are not those of equilibrated systems. It is a great theoretical challenge to understand the generic mechanisms and properties which define such systems. In this context, we propose a novel one-dimensional simple model without disorder exhibiting slow dynamics and aging at the zero temperature limit. This slow dynamics is due to entropic barriers. This talk presents how we can solve analytically the evolution of the slow one-time observable, as well as the corresponding aging two-time correlation function, under a simple adiabatic approximation, which allows to map the dynamics of the latter model on a Markovian random walker on the energy levels. It will also briefly introduce the study of the flip dynamics in a random tiling model which is of interest for the structural dynamics of quasi-crystals. This model is also controlled by entropic phenomena.

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