

PRIMERA PARTE:

Expositor: Ioannis Papageorgiou (UBA)

Titulo: The log-Sobolev inequality for unbounded spin systems on the lattice.

Resumen:

A criterion will be presented for the log-Sobolev inequality for unbounded spin systems on the lattice with non-quadratic interactions. This is a joint work with Takis Konstantopoulos (Uppsala) and James Inglis (INRIA). Furthermore, in the case of quadratic interactions, a perturbation result for the inequality will be presented.

SEGUNDA PARTE:

Expositora: Aurelia Deshayes (UBA)

Titulo : Scaling limit of subcritical contact process

Resumen:

I will talk about subcritical contact process on $\mathbb{Z}^d$. The contact process, introduced in 1974 by Harris, models the spread of an infection. It is one of the simplest interacting particle systems which exhibits a phase transition. In the subcritical case, the process vanishes if we start with a finite number of infected particles. But what happens if we start with infinite number of particles? I will present a work, in collaboration with Leo Rolla, about the description of the subcritical contact process for large times starting with all sites infected. The configuration is described in terms of the macroscopic locations of infected regions in space and the relative positions of infected sites in each such region (which involve a quasi stationary distribution of the contact process modulo translation). This work is an extension of a previous paper written by Andjel, Ezanno, Groisman and Rolla which describes the subcritical contact process seen from the rightmost infected particle in dimension 1.

Fecha: 13 de Junio, 15:00 hrs (primera parte) 16:30 hrs (segunda parte).

Lugar: Sala John Von Neumann (7mo piso), Centro de Modelamiento Matemático,