SEMINARIO

MODELAMIENTO ESTOCÁSTICO

EXPOSITOR

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Title

Collapse transition of a self-interacting partially directed random walk.

Abstract:

We investigate the $1 + 1$ dimensional self-interacting and partially directed self-avoiding walk, usually referred to by the acronym IPDSAW. The IPDSAW is known to undergo a extended-collapsed transition at a critical poin tβ_c We present here a new method that provides a probabilistic representation of the partition function, from which we derive a variational formula for the free energy. This variational formula allows us to prove the existence of the collapse transition and to identify the critical point in a simple way. We also provide the precise asymptotic of the free energy close to criticality and establish some path properties of the random walk inside the collapsed phase. This is a joint work with Nicolas Ptrlis and Philippe Carmona (University of Nantes, France).

Viernes 17 de octubre del 2014, a las 17 : 30 hrs, Sala de Seminarios John Von Neumann CMM, séptimo piso.