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Seminario Conjunto Modelamiento Estocástico / Núcleo MESCD

Expositor

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Título:

"Invariant measures of discrete interacting particle systems: Algebraic aspects"

Abstract:

We consider a continuous time particle system on a graph L being either Z, Z_n, a segment {1,..., n}, or Z^d, with state space Ek={0,…,k-1} for some k belonging to {infinity, 2, 3, ...}. We also assume that the Markovian evolution is driven by some translation invariant local dynamics with bounded width dependence, encoded by a rate matrix T. These are standard settings, satisfied by many studied particle systems. We provide some sufficient and/or necessary conditions on the matrix T, so that this Markov process admits some simple invariant distribution, as a product measure, as the distribution of a Markov process indexed by Z or {1,..., n} (if L=Z or {1,...,n}), or as a Gibbs measure (if L=Z_n). These results are mainly obtained with some manipulations of finite words, with alphabet Ek, representing subconfigurations of the systems. For the case L=Z, we give a procedure to find the set of invariant i.i.d and Markov measures.

Fecha: Martes 9 de Enero 15:00 hrs.
Lugar: Sala de seminarios John Von Neumann, ubicada en el 7mo. Piso, Torre Norte de Beauchef 851.