Mathematics and CS Seminar

Concentration of measure in interacting particle systems

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Host: Julian Fischer

This talk will be about an interacting particle system driven by two forces: a repulsive pairwise interaction between them, and a confining potential. At a positive temperature, their behavior is driven by the Gibbs measure associated with this Hamiltoninan. We will be interested in the rate of convergence to the mean-field limit as the number of particles tends to infinity. To this end, we will formulate and prove concentration inequalities. We will be interested in three cases: a Coulomb interaction, a Riesz-type interaction, and a general interaction.

Tuesday, May 14, 2024 04:15pm - 05:15pm

Office Bldg West / Ground floor / Heinzel Seminar Room (I21.EG.101)