
THE WEIZMANN INSTITUTE OF SCIENCE
FACULTY OF MATHEMATICS AND COMPUTER SCIENCE
Geometric Functional Analysis and Probability Seminar

Room 261 ,Ziskind Building
on Thursday, Jan 22, 2015at 11:05

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Large deviations for the empirical field of Coulomb and Riesz systems

Abstract:

We study a system of N particles with Coulomb/Riesz pairwise interactions under a confining potential. After rescaling we deal with a microscopic quantity, the associated empirical point process, for which we give a large deviation principle whose rate function is the sum of a relative entropy and of the "renormalized energy" defined by Sandier-Serfaty. We also present applications to point processes emerging from random matrix theory. This is joint work with S. Serfaty.