universität innsbruck

Department of Mathematics

Inn'formal Probability Seminar

Lorenzo Taggi (Sapienza Università di Roma)

"Random walk loops, dimers, spins and the Bose gas"

Abstract:

We introduce a random walk loop soup which reduces to or is related to several models of interest in statistical mechanics, including the Spin O(N) model, the Bose gas, the dimer model, the double dimer model, random lattice permutations. The main questions involve the characterisation of the size and the geometry of the random walk loops, which interact by mutual repulsion. We present some results about the existence of macroscopic loops in three and higher dimensions and some more recent results on the absence of macroscopic loops in two dimensional (not necessarily planar) graphs.

Tuesday | 28.05.2024 | 13:45

SR 609 Civil Engineering Building