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

on Thursday, Dec 16, 2021at 13:30

Sarai Hernandez-TorresTechnion

The chemical distance of random interlacements in the low intensity regime.

Abstract:

Random interlacements (RI) is a Poissonian soup of doubly-infinite random walk trajectories on Z^d. A parameter u > 0 controls the intensity of the Poisson point process. In a natural way, the model defines a long-range percolation on the edges of Z^d. We thus obtain the random interlacements graph, composed of those edges traversed by a trajectory in RI. This talk focuses on the chemical distance of the random interlacements graph in dimensions d \geq 5. In this setting, I will present a proof of novel upper and lower asymptotic bounds on the chemical distance for u << 1. This is a joint work with E. Procaccia and R. Rosenthal.