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

Room 155 ,Ziskind Building  
on Thursday, Nov 28, 2019at 13:30

Amir Dembo & Alexander Fish .

DOUBLE SEMINAR

Abstract:

Amir Dembo (Stanford) "Dynamics for spherical spin glasses: Disorder dependent initial conditions"

Abstract: In this talk, based on a joint work with Eliran Subag, I will explain how to rigorously derive the integro-differential equations that arise in the thermodynamic limit of the empirical correlation and response functions for Langevin dynamics in mixed spherical p-spin disordered mean-field models.

I will then compare the large time asymptotic of these equations in case of a uniform (infinite-temperature) starting point, to what one obtains when starting within one of the spherical bands on which the Gibbs measure concentrates at low temperature, commenting on the existence of an aging phenomenon, and on the relations with the recently discovered geometric structure of the Gibbs measures at low temperature.

Alexander Fish (Sydney) "Finite configurations in trees of positive growth rate"

Abstract: We will talk on the relation between the abundance of finite configurations that we observe in trees and their growth rate.

We will survey the Furstenberg-Weiss correspondence principle which relates a tree of positive growth rate with Markov process, and subsequently provides a quantitative relationship between the density of a finite subtree that appears in the tree with a quantity defined on the Markov space and which can be estimated by use of ergodic methods. We will sketch a proof of one direct and one inverse theorem relating the abundance of certain finite configurations and the growth rate of a tree. Some open problems related to this work will be discussed. Based on a joint work with Leo Jiang (Toronto).