PROBABILITY SEMINAR

TOPIC: **A Monomer-Dimer Model with Random Weights on the Complete Graph**

SPEAKER: **Emanuele Mingione, University of Bologna**

TIME: 11:00-12:00, 25 November 2014

VENUE: Room 1100, NYU Shanghai, 1555 Century Avenue, Pudong, Shanghai Zhongshan Road North, Shanghai
(上海纽约大学，浦东校区，1100 室)

ABSTRACT OF THE TALK

In this talk we considered a monomer-dimer model with independent random weights on the complete graph. Under very general conditions on the randomness one can prove that the quenched pressure density is self-averaging. In the case of i.i.d. monomer random weights we prove that the thermodynamical limit of the quenched pressure is given by the solution of a one-dimensional variational principle. We show that such solution is a smooth function of the dimeric weight. A sketch of the proof, based on a gaussian representation of the partition function, and some open questions will be discussed.