

Random graphs and its applications for networks

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Some aspects of random maps coupled with matter systems

A map is a graph drawn on a surface without edge crossings. Much attention has been devoted to the study of uniform random maps, and similar models. In particular, it has been shown that their metric structure admits a universal scaling limit called the Brownian map, which only depends on the topology of the underlying surface.

In contrast, much less is known in the physically-relevant case where a map is sampled with a probability proportional to the partition function of a statistical physics model (Ising, Potts...) defined on it. In this talk I will present some partial results on this topic.