

1044-60-70

Yuri Bakhtin* (bakhtin@math.gatech.edu), School of Mathematics, Georgia Institute of Technology, Atlanta, GA 30332. *Thermodynamic limit for random plane trees*. Preliminary report.

We consider Gibbs distributions on finite random plane trees with bounded branching. We show that as the size of the tree grows to infinity, the distribution of any finite neighborhood of the root of the tree converges to a limit. We compute the limiting distribution explicitly and study its properties. We introduce an infinite random tree consistent with these limiting distributions and show that it satisfies a certain form of the Markov property. We also show that this limiting infinite random tree satisfies a number of interesting limit theorems. (Received August 18, 2008)