

How to generate the random poset?

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One of the most important results in the theory of random graphs is given by Erdős and Rényi (1963) probabilistic construction of countable universal homogeneous graph, called from this reason *the random graph*. The random graph is obtained, with probability 1, as a limit of the $G(n, p)$ model where n tends to ∞ while $p \in (0, 1)$ is fixed. On the other hand it is a Fraïssé limit of the family of all finite graphs.

A natural question is whether Fraïssé limits of another relational structures (eg. generic poset or Henson graphs) can be constructed probabilistically. This question was answered affirmatively by Droste and Kuske (2003). However, it seems that properties of finite structures in their random model were not studied.

During the talk, focused on random posets, we analyse these properties in both Droste-Kuske and some other model, in which a linear extension to generated poset is given in advance.