Talk 8: Local limits of random trees

Speakers. Sven Keller & Justus Schilling
Date. Thursday, April 25.

Reference material:

Section 1.2 and Theorem 6 in [Curb], Section 3 in [Cura].

Goal

The goal is to introduce the notion of local topology and the associated convergence in distribution, and to study local limits of Erdos-Renyi random graphs and of uniform plane trees.

Content

- Framework of local convergence (Section 1.2 in [Curb]), Characterization of the law and of the convergence for the local topology (proposition 4 in [Curb]), local convergence of Erdos Renyi random graphs (Theorem 6 in [Curb]). You can skip Theorem 2 and Proposition 3 in [Curb].
- Local convergence of uniform plane trees (Theorem 7 in [Cura])

References

[Cura] Nicolas Curien. Local limits of random trees and maps (lecture notes). https://www.imo.universite-paris-saclay.fr/~nicolas.curien/cours/course-yep.pdf.

[Curb] Nicolas Curien. Random graphs the local convergence point of view (lecture notes). https://www.imo.universite-paris-saclay.fr/~nicolas.curien/cours/cours-RG.pdf.