

ATELIER « COMBINATOIRE, RANDOMISATION, ALGORITHMES ET PROBABILITÉS »  
4–8 MAI 2009

WORKSHOP “COMBINATORICS, RANDOMIZATION, ALGORITHMS AND PROBABILITY”  
MAY 4–8, 2009

## Scaling Limits for Random Trees in a Random Environment

LEA POPOVIC

Department of Mathematics and Statistics  
Concordia University  
1455 de Maisonneuve Blvd West  
Montréal, QC H3G 1M8  
CANADA

`lpopovic@mathstat.concordia.ca`

---

We consider random trees generated by a critical branching process in a random environment, and describe their scaling limit when the number of individuals in the population grows and the branching rate is appropriately sped up. To obtain the limit we exploit a representation of trees by their contour processes and their genealogical point-process. We also describe some differences between the statistics of large trees in a random environment and the classical continuum random tree in a constant environment.