THE STABLE LÉVY FOREST IS THE SCALING LIMIT OF MULTITYPE GALTON-WATSON FORESTS

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Abstract: Multitype Galton-Watson (GW) processes arise as a natural generalization of usual GW processes, in which individuals are differentiated by types that determine their offspring distribution. In this talk, we investigate the ancestor trees and forests associated with irreducible multitype GW processes, when the total number of types is finite. Under criticality hypotheses on the mean matrix, and such that the offspring distributions belong to the domain of attraction of a stable law, we show that these forests (after a proper rescaling) converge to the continuum random stable forest.

References

[1] G. Berzunza (2016). On scaling limits of multitype Galton-Watson trees with possibly infinite variance, *Submitted*.