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Seminario Probabilidades CMM

Speaker: Nicolas Curien

Title: Unraveling parking on random trees via random graphs.

Abstract: Imagine a plane tree together with a configuration of particles (cars) at each vertex.Each car tries to park on its node, and if the latter is occupied, it moves downward towards the root trying to find an empty slot.When the underlying plane tree is a critical Galton--Watson conditioned to be large, and when the cars arrivals are i.i.d. on each vertex, we observe a phase transition:- when the density of cars is small enough, all but a few manage to park safely,- whereas when the density of cars is high enough, a positive fraction of them do not manage to park and exit through the root of the tree.The critical density is an explicit function of the first two moments of the offspring distribution and cars arrivals (C. & Hénard 2019).We shall give a new point of view on this process by coupling it with the ubiquitous Erdös--Rényi random graph process.This enables us to fully understand the (dynamical) phase transition in the scaling limit by relating it to the multiplicative coalescent process. The talk is based on a joint work with Olivier Hénard and an ongoing project with Alice Contat.

Miércoles 14 de Octubre, 16:15 hrs.

Link zoom:
https://reuna.zoom.us/j/89498922857?pwd=MklwYzNiSEdNR05BekI0Wm9IQnZqZz09
https://eventos.cmm.uchile.cl/probseminar/

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