



## Mathematics and CS Seminar

# The Aldous diffusion on continuum trees

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Consider a binary tree with  $n$  labeled leaves. Randomly select a leaf for removal and then reinsert it back on an edge selected at random from the remaining structure. This produces a Markov chain on the space of  $n$ -leaved binary trees whose invariant distribution is the uniform distribution. David Aldous, who introduced and analyzed this Markov chain, conjectured the existence of a continuum limit of this process if we remove labels from leaves, scale edge-length and time appropriately with  $n$ , and let  $n$  go to infinity. The conjectured diffusion will have an invariant distribution given by the so-called Brownian Continuum Random Tree. In a series of papers, co-authored with N. Forman, D. Rizzolo, and M. Winkel, we construct this continuum limit. This talk will be an overview of our construction and describe the path behavior of this limiting object.

**Tuesday, June 11, 2019 04:30pm - 05:30pm**

Big Seminar room Ground floor / Office Bldg West (I21.EG.101)



This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station.

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