Cornell University Library

We gratefully acknowledge
supporting institutions

arXiv.org > math > arXiv:1204.3080

Search or Article-id

(Help | Advanced search)

All papers | Go!

Mathematics > Probability

Galton-Watson trees with vanishing martingale limit

Nathanael Berestycki, Nina Gantert, Peter Morters, Nadia Sidorova

(Submitted on 13 Apr 2012)

We show that an infinite Galton-Watson tree, conditioned on its martingale limit being smaller than $\eps$, agrees up to generation K with a regular μ-ary tree, where μ is the essential minimum of the offspring distribution and the random variable K is strongly concentrated near an explicit deterministic function growing like a multiple of $\log(1/\eps)$. More precisely, we show that if $\mu\ge 2$ then with high probability as $\eps \downarrow 0$, K takes exactly one or two values. This shows in particular that the conditioned trees converge to the regular μ-ary tree, providing an example of entropic repulsion where the limit has vanishing entropy.

Download:

- PDF
- PostScript
- Other formats

Current browse context:

math.PR

< prev | next >

new | recent | 1204

Change to browse by:

math

References & Citations

- NASA ADS

Bookmark (what is this?)

ScienceWISE

Submission history

Which authors of this paper are endorsers?

Link back to: arXiv, form interface, contact.