



Mathematics > Probability

Large Deviations for Non-Crossing Partitions

[Janosch Ortmann](#)

(Submitted on 1 Jul 2011)

We prove a large deviations principle for the empirical law of the block sizes of a uniformly distributed non-crossing partition. As an application we obtain a variational formula for the maximum of the support of a compactly supported probability measure in terms of its free cumulants, provided these are all non-negative. This is useful in free probability theory, where sometimes the R-transform is known but cannot be inverted explicitly to yield the density.

Subjects: **Probability (math.PR)**

Cite as: **arXiv:1107.0208 [math.PR]**

(or **arXiv:1107.0208v1 [math.PR]** for this version)

Submission history

From: Janosch Ortmann [[view email](#)]

[v1] Fri, 1 Jul 2011 12:22:28 GMT (224kb,D)

[Which authors of this paper are endorsers?](#)

Download:

- [PDF](#)
- [Other formats](#)

Current browse context:

math.PR

[< prev](#) | [next >](#)

[new](#) | [recent](#) | [1107](#)

Change to browse by:

[math](#)

References & Citations

- [NASA ADS](#)

Bookmark([what is this?](#))

