

ONE-SIDED VARIATIONS ON BINARY SEARCH TREES

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Abstract. We investigate incomplete one-sided variants of binary search trees. The (normed) size of each variant is studied, and convergence to a Gaussian law is proved in each case by asymptotically solving recurrences. These variations are also discussed within the scope of the contraction method with degenerate limit equations. In an incomplete tree the size determines most other parameters of interest, such as the height and the internal path length.

Key words and phrases: Random tree, limit distribution, recurrence equation, contraction, degenerate limit.