

# PROBABILISTIC ANALYSIS OF THE ASYMMETRIC DIGITAL SEARCH TREES

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**Abstract:** In this paper, by applying three functional operators the previous results on the (Poisson) variance of the external profile in digital search trees will be improved. We study the profile built over  $n$  binary strings generated by a memoryless source with unequal probabilities of symbols and use a combinatorial approach for studying the Poissonized variance, since the probability distribution of the profile is unknown.

**Key words:** Digital Search Tree, Profile, Functional Operators, Poisson Variance.

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