Testing of sequences by simulation
Antal Iványi and Balázs Novák
Eötvös Loránd University, Dept. of Computer Algebra

Abstract
Let $\xi$ be a random integer vector, having uniform distribution
$$P\{\xi = (i_1, i_2, \ldots, i_n) = 1/n^n\} \text{ for } 1 \leq i_1, i_2, \ldots, i_n \leq n.$$

A realization $(i_1, i_2, \ldots, i_n)$ of $\xi$ is called good, if its elements are different. We present algorithms Backward, Forward, Linear, Random, Tree, Garbage, Bucket which decide whether a given realization is good. We analyse the running time of these algorithms using simulation gathering data on all possible inputs for small values of $n$ and generating random inputs for large values of $n$ [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11].

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References


