A few algorithms for generating Mann-Whitney-Wilcoxon distribution

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Abstract

Mann-Whitney test (also called the Mann-Whitney-Wilcoxon (MWW) or Wilcoxon rank-sum test) is a non-parametric test for assessing whether two samples of observations come from the same distribution. To use it properly one must have MWW distribution or at least it's quantiles. A few algorithms for generating MWW distribution will be shown together with their implementation in C++ using (where possible) library for unlimited precision integers. Also Kolmogorov-Smirnov distance of MWW distribution and Normal distribution, calculated with the help of above routines, will be presented.