

Title: Permutation Tests of Statistical Hypotheses

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Abstract:

This thesis presents permutation tests concept. Permutation test is demonstrated as response to testing problems where it is inconvenient to make any deeper presumptions on data probability distribution. For some of these problems it is even the only exact solution.

The construction of permutation test is described in the thesis as well as approach to search of the most powerful tests to specific alternatives.

In the second part of the thesis there are comparisons of powers of parametric, permutation and rank test using simulations.

The result is that power of parametric and permutation test are very similar most of the times and that confirms that permutation tests are useful tool for praxis.

Keywords: Permutation tests, Exact tests, Hypothesis testing, Power of tests