



Universiteit
Leiden
The Netherlands

Permutation-based inference for high-dimensional data.

Hemerik, J.

Citation

Hemerik, J. (2018, May 1). *Permutation-based inference for high-dimensional data*. Retrieved from <https://hdl.handle.net/1887/61825>

Version: Not Applicable (or Unknown)

License: [Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

Downloaded from: <https://hdl.handle.net/1887/61825>

Note: To cite this publication please use the final published version (if applicable).

Cover Page



Universiteit Leiden



The handle <http://hdl.handle.net/1887/61825> holds various files of this Leiden University dissertation.

Author: Hemerik, J.

Title: Permutation-based inference for high-dimensional data

Issue Date: 2018-05-01

Stellingen bij het proefschrift
“Permutation-based inference for high-dimensional data”

1. Permutation-based multiple testing methods tend to be relatively powerful. (this thesis)
2. Permutation-based multiple testing methods do not require underlying p -values to be exact. (this thesis)
3. Even in exploratory research, confidence statements are useful. (this thesis)
4. Controlling the false discovery rate at a certain level does not imply that the false discovery proportion is below or near that level with substantial confidence. (this thesis)
5. A confidence upper bound for the false discovery proportion provides an indication of the uncertainty of an estimate of that proportion.
6. In the permutation testing literature, more emphasis should be put on the requirement of a group structure.
7. In Fisher’s *Lady Tasting Tea* experiment, the group structure of the permutations is not essential, so that this experiment is not a permutation test in the usual sense.
8. Using thousands rather than about one hundred random permutations in the permutation test increases reproducibility, but does not substantially improve power.
9. Reported confirmatory studies have limited meaning if they have been selected for publication based on the extent to which they confirm.
10. Als wiskundestudenten meer over niet-parametrische statistiek leerden, zou dit hun enthousiasme voor statistiek aanwakkeren.
11. Een voorspellingsmodel: Als het eindelijk vriest in Nederland, dan zal in de loop van de week de temperatuur gaan stijgen.
12. “Die Zufälligkeit ist eine bloß subjektive Erscheinung, entstehend aus der Begränzung des Horizonts unseres Verstandes, und so subjektiv, wie der optische Horizont, in welchem der Himmel die Erde berührt.” (Arthur Schopenhauer, 1818, *Die Welt als Wille und Vorstellung*)

The above tells us that with enough information, we can take the (medical) decision with the best outcome.

Jesse Hemerik
Leiden, 1 mei 2018