MEDICAL UNIVERSITY OF VIENNA

Wiener Biometrische Sektion
der Internationalen Biometrischen Gesellschaft
Region Österreich – Schweiz

Einladung zum Biometrischen Kolloquium

SEBASTIAN DÖHLER,

Hochschule Darmstadt, Deutschland

CONTROLLING THE FALSE DISCOVERY RATE FOR DISCRETE TEST STATISTICS: SOME RESULTS AND COMPUTATIONAL TOOLS

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Informatikbibliothek der MUW, Spitalgasse 23, Raum 88.03.806
Medizinischen Universität Wien, Spitalgasse 23, 1090 Wien

HOST: Florian Frommelt

ABSTRACT:
The Benjamini-Hochberg procedure and related methods are classical methods for controlling the false discovery rate for large scale multiple testing problems. These procedures were originally designed for continuous test statistics. In many applications, e.g. when data represent frequencies or counts, the test statistics are however discretely distributed. While it is known that e.g. the Benjamini-Hochberg procedure still controls the false discovery rate in the discrete paradigm, it may be unnecessarily conservative. Thus, there is interest in developing more powerful FDR procedures for discrete data. In this talk we review improved procedures that incorporate the discreteness of the p-value distributions. We also give an introduction to 'DiscreteFDR', a new R package which implements these approaches.
Joint work with Etienne Roquain, Guillermo Durand and Florian Junge.