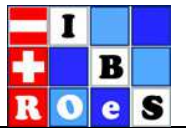
Einladung zum Biometrischen Kolloquium

Wiener Biometrische Sektion
der Internationalen Biometrischen Gesellschaft
Region Österreich – Schweiz



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A GRAPHICAL APPROACH TO RESAMPLING BASED MULTIPLE TESTING PROCEDURES

19. Juli 2016 um 10:00 Uhr

Seminarraum (Ebene 3, Raum 88.03.513)
Zentrum für Medizinische Statistik, Informatik und Intelligente Systeme (CeMSIIS)
Medizinische Universität Wien, Spitalgasse 23, 1090 Wien
(Plan: http://www.muw.ac.at/cemsiis/allgemeines/anschrift/)

Abstract:

Recently multiple test procedures have been developed that reflect the relative importance of different study objectives, such as fixed sequence, fallback, and gatekeeping procedures. In addition, graphical approaches have been proposed that facilitate the visualization and communication of Bonferroni-based closed test procedures for common multiple test problems, such as comparing several treatments with a control, or assessing the benefit of a new drug for more than one endpoint.

Being based on the Bonferroni test, these procedures suffer from considerable conservativeness, especially in situations where test statistics are correlated. In this talk I will present extended graphical approaches that disassociate the underlying weighting strategy from the employed test procedure. This allows one to first derive suitable weighting strategies that reflect the given study objectives and subsequently apply resampling based multiple testing procedures that account for the correlation between test statistics even if the joint distribution of test statistics is unknown. I will illustrate the extended graphical approaches with several examples and simulations. In addition, I will present an implementation based on the R packages flip and gMCP.