

**Wiener Biometrische Sektion
der Internationalen Biometrischen Gesellschaft
Region Österreich – Schweiz**

<http://www.meduniwien.ac.at/wbs/>

Einladung zum

BIOMETRISCHEN KOLLOQUIUM

am **Donnerstag, 12. November 2015** um **16:30 Uhr** (s.t.)

in der Informatik-Bibliothek (Ebene 3, Raum 88.03.806) des
Zentrums für Medizinische Statistik, Informatik und Intelligente Systeme (CeMSIIS)
der Medizinischen Universität Wien, Spitalgasse 23, 1090 Wien
(Plan siehe <http://www.muw.ac.at/cemsiis/allgemeines/anschrift/>)

Vortragender:

LUDWIG A. HOTHORN

Leibniz University Hannover, Germany

**SIMULTANEOUS INFERENCE
USING MULTIPLE MARGINAL MODELS IN R (MMM)**

Wir freuen uns auf zahlreichen Besuch.

Franz König
Präsident

Stephan Lehr
Sekretär

SIMULTANEOUS INFERENCE USING MULTIPLE MARGINAL MODELS IN R (MMM)

LUDWIG A. HOTHORN

Leibniz University Hannover, Germany

Abstract:

The workhorse of multiple comparison procedure providing simultaneous confidence intervals (sCI) is the central k-variate t distribution. However, the explicit formation of the correlation matrix is needed, which is strange in some cases. An alternative is the multiple marginal model approach (Pipper et al. 2012). The variance-covariance matrix of parameter estimates is obtained using derivatives of the log likelihood function of k models based on standardized score vectors as sum of i.i.d. normally distributed random variables, asymptotically. This approach is available as the function `mmm` within the package `multcomp`.

In this talk several applications are discussed: i) sCI for multiple endpoints in multi-arm trials, ii) sCI for multiple binary endpoints (also in multi-arm trials: Williams-type sCI), iii) multiple regression models within the Tukey trend test, iv) composite binary endpoints, v) subgroup analysis with claim for total, targeted and complementary populations, vi) max-tests on both a factor and a covariate.