Wiener Biometrische Sektion
der Internationalen Biometrischen Gesellschaft
Region Österreich – Schweiz
http://www.meduniwien.ac.at/wbs/

Einladung zum

BIOMETRISCHEN KOLLOQUIUM

am **Montag, 28. April 2014** um **10:00 Uhr** (s.t.)

Im Besprechungszimmer des Institutes für Medizinische Statistik
(Ebene 3, Raum 88.03.506) 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:

HOLGER DETTE

Ruhr-Universität Bochum

OPTIMAL DESIGN FOR DOSE FINDING STUDIES WITH AN ACTIVE CONTROL

Wir freuen uns auf zahlreichen Besuch.

Gerhard Svolba
Präsident

Franz König
Sekretär

OPTIMAL DESIGN FOR DOSE FINDING STUDIES WITH AN ACTIVE CONTROL

HOLGER DETTE

Ruhr-Universität Bochum

Joint work with
Frank Bretz, Norbert Benda, Christine Kiss and Kathrin Kettelhake

Abstract:

Dose finding studies often compare several doses of a new compound with a marketed standard treatment as an active control.

In the past, however, research has focused mostly on experimental designs for placebo-controlled dose finding studies. As the statistical analysis for an active controlled dose finding study can be formulated in terms of a mixture of two regression models, the related design problem is different to what has been investigated before in the literature.

We present a rigorous approach to the problem of determining optimal designs for estimating the smallest dose achieving the same treatment effect as the active control.

We determine explicitly the locally optimal designs for a broad class of models employed in such studies.

We also discuss robust design strategies and determine related Bayesian and standardized minimax optimal designs. We illustrate the results by investigating alternative designs for a clinical trial which has recently appeared in a consulting project of one of the authors.