

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

<http://www.akh-wien.ac.at/wbs/>

Einladung zum

Biometrischen Kolloquium

am Montag, dem 21. Juni 2004, 16:00 Uhr
im Kleinen Hörsaal der Histologie
Schwarzspanierstraße 17, 1090 Wien
Eingang Hof links Hochparterre Gebäude d. Histologie

Es spricht Prof. William F. Rosenberger von der Universität Maryland
USA zum Thema:

**Maximizing Power and Minimizing Treatment Failures
in Clinical Trials**

William F. Rosenberger, Yevgen Tymofyeyev and Feifang Hu

**Karl Moder
Brannath**

Präsident

Sekretär

Werner

Abstract

We describe allocation in clinical trials as a formal optimization problem: for fixed power, minimize the expected number of treatment failures. Since the solution to this problem depends on unknown parameters, we find appropriate response-adaptive randomization procedures to target this optimal allocation. We compare several response-adaptive randomization procedures and find a procedure by Eisele (1994) and adapted by Hu and Zhang (2004) is the preferred method. We show the direct impact on power of the variability of the response-adaptive randomization procedure. We then extend all results to clinical trials of more than two treatments.