



## Mathematisches Kolloquium

Am Freitag, dem 25. Januar 2013 spricht um 14.00 Uhr et im Hörsaal IV  
der Fachrichtung Mathematik (Gebäude E2 4)

**Prof. Dr. Peter Eichelsbacher**  
**Ruhr-Universität Bochum**

über das Thema:

### **Stein's method: evaluating the quality of distributional approximations**

*Abstract:* Stein's method has emerged as a powerful new tool for assessing the quality of distributional approximations. Based on a differential or difference equation characterization of a target distribution, it is notable for avoiding the use of transforms, and for supplying bounds, such as those of Berry-Esseen quality, on approximation error in the presence of dependence. In the talk an introduction of the method will be given and the method for exchangeable pairs for a rich class of distributional approximations including the Gaussian distribution as well as some non-Gaussian limit distributions will be presented. We will mention applications for dependent random variables occurring in statistical mechanics and some further new developments.

Der Gast wird von Prof. Dr. R. Speicher betreut.

Alle Interessenten sind zum Vortrag herzlich eingeladen.

Kaffee ab 13.45 Uhr im Konferenzraum der Mathematik (Erdgeschoss, Raum 1.03)

**Die Dozenten der Mathematik**