



## Mathematisches Kolloquium

Am Freitag, dem 6. Juli 2012 spricht um 14.00 c.t. Uhr im Hörsaal IV  
der Fachrichtung Mathematik (Gebäude E24)

**Prof. Dr. Giovanni Peccati**  
**Luxemburg**

über das Thema:

### **High frequency analysis of spherical fields and random walks on group duals**

*Abstract:* We shall explore the problem of characterizing the asymptotic Gaussianity of the high-frequency components of isotropic random fields defined on the unit sphere. Our main findings are expressed in terms of convolutions of Clebsch-Gordan matrices, that are unitary matrices intertwining reducible representations of  $SO(3)$ , and admit a neat representation in terms of random walks on group duals. Strong motivations come from the statistical analysis of the Cosmic Microwave Background radiation.

Based on several joint works with D. Marinucci (Rome).

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 (EG - 1.03)

**Die Dozenten der Mathematik**