



## Mathematisches Kolloquium

Am Freitag, dem 20. November 2015 spricht um 14 Uhr c. t. im Hörsaal IV  
der Fachrichtung Mathematik (Gebäude E24)

**Prof. Dr. Hans Maassen**  
**University of Amsterdam, Netherlands**

über das Thema:

### **Ergodic decomposition of measurement records**

*Abstract:* We consider a general measurement on a finite quantum system, repeated infinitely often. We show that determination of the asymptotic or 'macroscopic' behaviour of the record of measurement outcomes amounts to a single well-defined von Neumann (or 'projective') measurement on the quantum system. This asymptotic behaviour can either be viewed as establishing itself in the course of the observation, or as being revealed. This ambivalent character has been noticed in a special, 'non-demolition' case by Fröhlich et al., and was aptly baptized 'the emergence of facts in quantum mechanics'.

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

Alle Interessenten sind zum Vortrag herzlich eingeladen.

Kaffee und Tee ab 13.45 Uhr im Konferenzraum der Mathematik (Erdgeschoss, Raum 103)

**Die Dozenten der Mathematik**