**UNIVERSITÄT DES SAARLANDES**
**Naturwissenschaftlich-Technische Fakultät I**
**Fachrichtung 6.1 Mathematik**

## Mathematisches Kolloquium

Am Freitag, den 15. Juni 2012, spricht um 14 Uhr c.t. im Hörsaal IV der Fachrichtung Mathematik (Gebäude E2 4)

**Prof. Uffe Haagerup**

**Universität Kopenhagen, Dänemark**

über das Thema: **Approximation properties for groups and von Neumann algebras**

*Abstract:* This talk is about recent advances concerning approximation properties for groups and group von Neumann algebras. In 1994 Jon Kraus and I introduced a new approximation property (AP) for locally compact groups and we proved that for dicrete groups AP is equivalent to the property W*-OAP of Effros and Ruan for the group von Neumann algebra. Recently Vincent Lafforgue and Michael de la Salle has proved that SL(n,R) and SL(n,Z) does not have the property AP for n ¿= 3. In a joint work with Tim de Laat we extend their result by proving that Sp(2,R) and more generally all simple connected Lie groups of real rank ¿=2 and with finite center do not have the AP. The proof uses some careful estimates of Jacobi polynomials obtained in collaboration with Henrik Shlichtkrull.
The talk addresses a general audience with mathematical background and starts on an elementary level.

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**