



JACOBS  
UNIVERSITY

# Mathematics Colloquium at Jacobs University Bremen

JÖRN STEUDING

(Universität Würzburg)

will speak on

*Power Moments of the Riemann Zeta-Function  
and Conjectures from Random Matrix Theory*

**Date:** Monday, February 11, 2008

**Time:** 17:15

**Place:** Lecture Hall Research II, Jacobs University

**Abstract:**

The location of the zeros of the Riemann zeta-function  $\zeta(s)$  is of special interest with respect to the distribution of prime numbers. The famous Riemann hypothesis claims that all non-real zeros lie on the critical line  $\operatorname{Re} s = 1/2$ . The vertical distribution statistics of these zeros seem to match the eigenvalue statistics of the Gaussian unitary ensemble from random matrix theory. In the recent past random matrices were used to model the Riemann zeta-function on the critical line. In the talk we discuss several related moment conjectures for  $\zeta(s)$  and sketch an application to the question how large gaps between consecutive zeros can be.

**Colloquium Tea** at ca. 16:45 in the Tea Room of Research II, close to the lecture hall. Everybody is welcome!