Mathematics Colloquium
at Jacobs University Bremen

Gregg Zuckerman

(Yale University)

will speak on

Cohomological Induction
in the Representation Theory of Lie Algebras

Date: **Monday, May 7, 2007**
Time: **17:15**
Place: **Lecture Hall Research II, Jacobs University**

Abstract:
Ordinary induction from a subalgebra to an algebra plays a fundamental role in the representation theory of Lie algebras. However, in the theory of semisimple Lie algebras over the complex numbers, the more general notion of cohomological induction yields infinite dimensional modules which cannot be obtained by ordinary induction. We will review this notion, starting with its inception in the late 1970's up to its recent applications to locally finite dimensional Lie algebras. Some references include Vogan's *Representations of Real Reductive Lie Groups*, and Knapp and Vogan's *Cohomological Induction and Unitary Representations*. See also our joint work with Ivan Penkov at `math.iu-bremen.de/penkov`.

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

M. Stoll