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Leibniz
Universität
Hannover

Oberseminar Analysis und Theoretische Physik

Prof. Dr. Siegfried Echterhoff

Westfälische Wilhelms-Universität Münster

K-theory of semi-group algebras

(a report on joint work with Xin Li and Joachim Cuntz)

Abstract: Suppose that S is a subsemigroup of a group G containing the unit of G . Then each element of $s \in S$ defines an isometry $V_s : \ell^2(S) \rightarrow \ell^2(S)$ by $V_s \delta_t = \delta_{st}$ where $\{\delta_t : t \in S\}$ denote the canonical orthonormal basis of $\ell^2(S)$. Then the reduced semigroup C^* -algebra $C_\lambda^*(S)$ is defined as the C^* -algebra generated by $\{V_s : s \in S\}$.

We show that in many interesting cases there is a very easy formula for the K -theory of such algebras, which is obtained with the help of the Baum-Connes conjecture for G . Motivating examples for the study of such semigroup algebras are the algebras attached to the $ax+b$ -semigroups $R \rtimes R^\times$ in which R is the ring of integers in an algebraic number field K .

**Dienstag, 08.01.2013, 15:00 Uhr, Raum g005
Hauptgebäude der Leibniz Universität**

Dazu laden herzlich ein:
Prof. Dr. Joachim Escher
Prof. Dr. Olaf Lechtenfeld
Prof. Dr. Elmar Schrohe
Prof. Dr. Christoph Walker