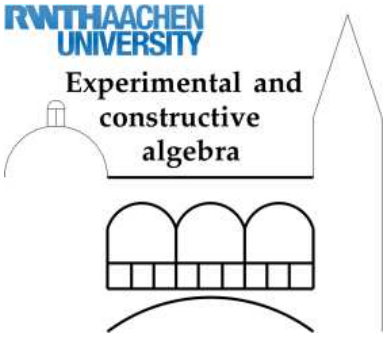
Graduiertenkolleg

Experimentelle und konstruktive Algebra



Kolloquiumsvortrag

Dienstag, 24. Mai 2016, 14:00 Uhr, SeMath

Mahya Ghandehari (University of Delaware, Newark, Delaware, USA):
Matrix coefficients of unitary representations and projections in $L^1(G)$

Let G be a unimodular locally compact group, and $L^1(G)$ denote the Banach *-algebra of integrable functions on G. In this talk, we use facts concerning subspaces of the Fourier-Stieltjes and Fourier algebras of G to describe certain self-adjoint idempotents (projections) in $L^1(G)$. The Fourier-Stieltjes algebra of a locally compact group G, denoted by $B(G)$, is the set of all the matrix coefficient functions of G equipped with pointwise algebra operations. Eymard proved that $B(G)$, when identified with the dual of the group C^*-algebra of G, becomes a Banach algebra.

In this talk, we study subspaces of $B(G)$, called $A_\pi(G)$, generated by all the matrix coefficient functions of G associated with a fixed unitary representation π. We then obtain an explicit description of any projection in $L^1(G)$ which happens to also lie in the coefficient space of a finite direct sum of irreducible representations. This leads to a complete description of all projections in $L^1(G)$ for G belonging to a class of groups that includes $SL_2(R)$ and all almost connected nilpotent locally compact groups.

This talk is based on an article joint with M. Alaghmandan, N. Spronk, and K.F. Taylor.

Wir laden alle Interessierten herzlich ein.