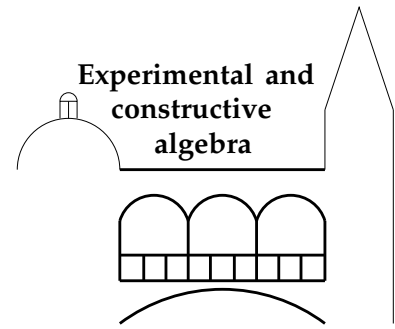


Graduiertenkolleg

# Experimentelle und konstruktive Algebra



## Kolloquiumsvortrag

Dienstag, 14. November 2017, 14:00 Uhr, Hörsaal III

**CHRISTOPH SCHÖNNENBECK (LEHRSTUHL D FÜR MATHEMATIK):**  
***Induced Modules of Iwahori-Hecke Algebras***

In 1964 Nagayoshi Iwahori was able to show that the endomorphism ring of a certain natural permutation module of the general linear group  $GL_n(q)$  had an elegant presentation in terms of generators and relations. These relations can be seen to be very similar to those defining Coxeter groups of type  $A$ , i.e. symmetric groups. This concept was then generalised to define the notion of an Iwahori-Hecke algebra for an arbitrary Coxeter group.

In group algebras there is the concept of induction from subgroups and a similar construction also exists for Iwahori-Hecke algebra which are in fact very closely related to group algebras of Coxeter groups. I will show that under certain weak conditions a module obtained in such an inductive manner is always non-simple.

The talk's first part will be very basic and only contain the necessary definitions, some examples, and the main result. After the break I will go into detail on how to prove the main theorem.

Wir laden alle Interessierten herzlich ein.