



1 1  
1 0 2  
1 0 0 4

Leibniz  
Universität  
Hannover

# Oberseminar zur Algebra und Algebraischen Kombinatorik

**Paul Mücksch**  
(Leibniz Universität Hannover)

## „Supersolvable simplicial arrangements“

A simplicial arrangement is a finite set of hyperplanes in a finite dimensional real vector space which cuts simplicial cones out of the ambient space. For example all Coxeter arrangements, i.e. the reflection arrangements of the finite real reflection groups are simplicial. The classification of these natural geometric objects remains an open problem.

The supersolvable arrangements are a further important class in the theory of hyperplane arrangements. They possess nice algebraic, geometric, and combinatorial properties.

Inspired by M. Cuntz and I. Heckenberger's recent work and the resulting classification of crystallographic arrangements (which constitute a large subset of the known simplicial arrangements) we introduce Coxeter graphs for simplicial arrangements. Using this tool and further geometric and combinatorial considerations we are able to classify the supersolvable simplicial arrangements.

This is partly joint work with M. Cuntz and T. Hoge.

**Donnerstag, 29.06.2017**  
**ab 14:15 Uhr, Raum a410**  
Hauptgebäude der Leibniz Universität Hannover

Alle Interessierten sind herzlich eingeladen.

Institut für Algebra, Zahlentheorie  
und Diskrete Mathematik