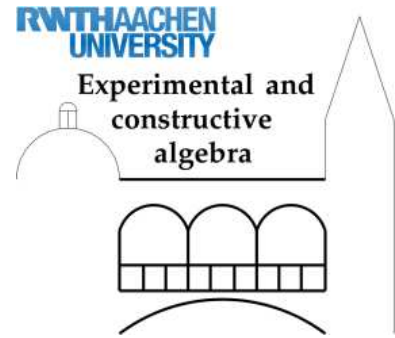


Graduiertenkolleg

# Experimentelle und konstruktive Algebra



## Lattices, codes and modular forms

Workshop, September 26–29, 2011.

All talks will take place at **Hörsaal III (Hauptgebäude)**.

### Monday (Sep 26):

- 14:00 – 14:05 Welcome  
14:05 – 15:05 JACQUES MARTINET: *From positive definite quadratic forms to Euclidean lattices*  
– Coffee break –  
16:00 – 16:30 BERTRAND MEYER: *Some constructions of maximal witness codes*  
16:45 – 17:15 ELISABETH NOSSEK: *Dual strongly perfect lattices*  
17:30 – 18:00 RUDOLF SCHARLAU: *Extremality of modular forms, lattices and sphere packings*

### Tuesday (Sep 27):

- 09:15 – 10:15 SIEGFRIED BOECHERER: *Harmonic polynomials for quadratic forms with hermitian structure and associated theta series*  
– Coffee break –  
11:00 – 11:30 BORIS VENKOV: *Unimodular lattices and strongly regular graphs (some examples and problems)*  
11:45 – 12:15 ANNIKA MEYER: *On a recursive decoding algorithm for glued lattices*  
– Lunch –  
14:00 – 15:00 WILHELM PLESKEN: *Codes and hyperplane arrangements*  
– Coffee break –  
16:00 – 16:30 RICHARD PARKER: *Integral laminated lattices*  
16:45 – 17:30 RAINER SCHULZE-PILLOT-ZIEMEN: *On extremal modular forms*

### Wednesday (Sep 28): (On afternoon the workshop turns into the AKLS seminar on automorphic forms.)

- 09:15 – 10:15 HEINZ-GEORG QUEBBEMANN: *Type II self-dual algebraic geometric codes*  
– Coffee break –  
11:00 – 11:30 MANABU OURA: *Some consequences of the work of Nebe-Rains-Sloane*  
11:45 – 12:15 GABRIELE NEBE: *Automorphisms of extremal codes*  
– Lunch –  
14:00 – 14:05 Welcome (Seminar Aachen-Köln-Lille-Siegen)  
14:05 – 14:55 CHRISTINE BACHOC: *Lower bounds for the measurable chromatic number of Euclidean space*  
15:00 – 15:50 VALENTIN BLOMER: *Counting rational points on a cubic surface*  
– Coffee break –  
17:00 – 17:50 JAN BRUINIER: *On the converse theorem for Borchers products*  
– Dinner –

### Thursday (Sep 29):

- 09:00 – 09:20 DAVID LORCH: *Einklassige Geschlechter 3-dimensionaler Gitter*  
09:30 – 09:50 MICHAEL JÜRGENS: *Nicht-Existenz extremaler Gitter: eine weitere Anwendung der Methode von Bachoc-Venkov*  
10:00 – 10:20 JUAN MARCOS CERVIÑO: *Infinitesimal aspects of the theta-series map*  
– Coffee break –  
11:00 – 11:20 STEFAN HÖPPNER / TIMO ROSNAU: *Ganzzahlige orthogonale Darstellungen der zyklischen Gruppe, Teil I*  
11:30 – 11:50 BJÖRN HOFFMANN: *Ganzzahlige orthogonale Darstellungen der zyklischen Gruppe, Teil II*  
12:00 – 12:20 JAN JONGEN: *Lattices over twisted group rings and rational forms of finite groups*