

# Seminar für Geometrie -- WiSe18/19

Dozent:

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Seminar:

Tuesday, 14:00  
Arnimallee 2 Seminar Room

**Erste Termin:** Oktober 16 2017

## Wöchentlicher Plan

### **Week 1 (October 16) - Präsentation von Themen**

Die Themen werden diskutiert.

### **Week 2 (October 23) - Affine Euclidean Space and Isometries**

**References:** Borovik-Borovik Chapter 1-2

### **Week 3 (November 6) - Hyperplane Arrangements**

**References:** Borovik-Borovik Chapter 3

### **Week 4 (November 13) - Polyhedral Cones**

**References:** Borovik-Borovik Chapter 4

### **Week 5 (November 20) - Systems of Mirrors**

**References:** Borovik-Borovik Chapter 5-6-7

### **Week 6 (Nov. 27): Root Systems**

**References:** Borovik-Borovik Chapter 8

**Week 7 (Dec. 4): Root Systems A-B-D**

References: Borovik-Borovik Chapter 9

**Week 8 (Dec. 11): Chambers and Generation**

References: Borovik-Borovik Chapter 10-11

**Week 9 (Dec. 18): Coxeter Complex**

References: Borovik-Borovik Chapter 12

**Week 10 (Jan. 8): Residues and generalized Permutahedra**

References: Borovik-Borovik Chapter 13-14

**Week 11 (Jan. 15): Generators and Relations**

References: Borovik-Borovik Chapter 15

**Week 12 (Jan. 22): Classification of Finite reflection groups**

References: Borovik-Borovik Chapter 16, Humphreys Chapter 2

**Week 13 (Jan. 29): Constructions of Root Systems**

References: Borovik-Borovik Chapter 17

**Week 14 (Feb. 5): Orders of Reflection groups**

References: Borovik-Borovik Chapter 18

**Week 15 (Feb. 12): Reflection groups in 3D**

References: Borovik-Borovik Chapter 19

**Week 16 (Feb. 19): Icosahedron**

References: Borovik-Borovik Chapter 20