



universität  
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Fakultät für Mathematik

## Mathematisches Kolloquium

Mittwoch, 30. Jänner 2019

Sky Lounge

### EINLADUNG

**Dietrich Burde**

(Uni Wien)

„Crystallographic Groups: Geometry and Algebra“

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### **Abstract:**

*Crystallographic groups are groups acting by isometries on some  $n$ -dimensional Euclidean space with compact quotient. The origin of the name **crystallographic** comes from the symmetry groups of 3-dimensional crystals in real life. We discuss both the geometric and the algebraic aspects of the theory of crystallographic groups and its generalizations. The theory of affine crystallographic groups leads us to étale affine representations of Lie algebras and algebraic groups. The latter is a special case of prehomogeneous representations. We discuss a conjecture of V. Popov in the context of linearizable subgroups of the Cremona group on affine space, which can be reformulated in terms of étale affine representations. We present a counterexample to this conjecture.*

**15.45 Uhr: Kaffeejause**

**16.15 Uhr: Vortrag**

**vinum cum pane im Anschluss**

Christian Krattenthaler