



## Mathematisches Kolloquium

Am Freitag, dem 01. Februar 2013 spricht um 14.00 Uhr et im Hörsaal IV  
der Fachrichtung Mathematik (Gebäude E24)

**Prof. Dr. Michael Joswig**  
**Technische Universität Darmstadt**

über das Thema:

### **Lattice Polygons and Real Roots**

*Abstract:* It is known from theorems of Bernstein, Kushnirenko and Khovanskii from the 1970s that the number of complex solutions of a system of multivariate polynomial equations can be expressed in terms of subdivisions of the Newton polytopes of the polynomials. For very special systems of polynomials Soprunova and Sottile (2006) found an analogue for the number of real solutions. In joint work with Ziegler we could give a simple combinatorial formula for the signature of foldable triangulation of a lattice polygon. Via the Soprunova-Sottile result this translates into lower bounds for the number of real roots of certain bivariate polynomial systems.

Der Gast wird von Prof. Dr. H. Markwig betreut.

Alle Interessenten sind zum Vortrag herzlich eingeladen.

Kaffee ab 13.45 Uhr im Konferenzraum der Mathematik (Erdgeschoss, Raum 1.03)

**Die Dozenten der Mathematik**