

WORKSHOP ON T-VARIETIES

03.08.2006–04.08.2006

Speakers:

Klaus Altmann (Berlin)

René Birkner (Berlin)

Hendrik Süß (Cottbus)

Robert Vollmert (Tübingen)



Location: Freie Universität
Arnimallee 3, 14195 Berlin
Hörsaal 1

03.08.06 at 11.00 **René Birkner**

GIT and Chow Quotients by Tori

In this talk we will give a gentle introduction to invariant theory. In particular, categorical, good, and geometric quotients, as well as linearisations and (semi)stable points will be defined. As an application, we will see how the torus $T = \mathbb{C}^*$ acts on \mathbb{C}^n and that GIT-quotients are toric (fiberpolytopes). The Chow quotient is given by the Minkowski sum of them.

03.08.06 at 14.00 **Klaus Altmann**

Affine T-Varieties

We will look at affine toric varieties or \mathbb{C}^n as T-varieties and describe closed T-subvarieties. As a useful tool, we will give the general construction of polyhedral divisors and, in the special case of codimension 1 actions, we will compare these with toroidal varieties. Examples are the Russell cubic and certain non-normal surfaces.

03.08.06 at 16.00 **Hendrik Süß**

Morphisms and Gluing

The topics of this talk are morphisms among affine T-varieties, localization by homogeneous elements and open embeddings. We will have a look at divisorial fans; these will be illustrated by examples like toric vector bundles and compactifications of affine \mathbb{C}^* -surfaces.

04.08.06 at 10.30 **Robert Vollmert**

Grass(2,n) as a fancy divisor on $M_{0,n}$

We will describe Chow quotients and secondary polytopes and see that $\overline{M}_{0,n}$ equals the Chow quotient of Grass(2,n). Then we will calculate an affine chart of Grass(2,4) or of Grass(2,n) and have a look at the affine cone over a projective T-variety.

04.08.06 at 14.00

Open discussion on further topics

Organisers:

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Gavin Brown (Kent, UK) gdb@kent.ac.uk

To register: please email gdb@kent.ac.uk before 28 July 2006

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(There is no registration fee; meals are at participants' own expense.
There may be limited support for graduate students.)