

## Alvaro Liendo (Chile / Grenoble) Ga-actions on affine T-varieties

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Let  $X = \text{spec } A$  be a normal affine variety endowed with an effective action of a torus  $T$  of dimension  $n$ . To introduce a  $G$ -action on  $X$  is equivalent to fix a locally nilpotent derivation  $D$  on the  $\mathbb{Z}$ -graded algebra  $A$ . In this talk we show some classification result of pairs  $(A, D)$  in the case where  $D$  is homogeneous and with special emphasis in the case where the general orbits of the  $G$ -action are contained in the orbit closures of the  $T$ -action. In particular, we give the birational characterization of normal affine varieties with trivial Makar-Limanov invariant.

**Kontakt:**

Humboldt-Universität zu Berlin . Institut für Mathematik  
SFB 647 . Unter den Linden 6 . 10099 Berlin  
Tel. +49 30 2093 1804 . Fax. +49 30 2093 2727  
sfb647@math.hu-berlin.de