# Computing global vector fields on varieties with torus actions

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The space of global vector fields is an important invariant of an algebraic variety. In this talk, I will discuss an approach to computing this space for smooth varieties endowed with the effective action of an algebraic torus. Indeed, for such varieties, the space of global vector fields can be described in terms of global vector fields on a suitable quotient. For the special case of rational varieties with a complexity-one torus action, these computations become quite explicit.
This approach relies upon general machinery for describing equivariant vector bundles on varieties with torus action.

*Joint work with Hendrik Suess (University of Edinburgh).*