

## Anton Leykin: **Effective Noetherianity up to symmetry**

Given a polynomial ring in infinitely many variables with an action of a large group or monoid, we consider invariant ideals that are finitely generated up to symmetry. Some rings can be shown to be equivariantly Noetherian, but in general not all ideals are finitely generated by orbits of finitely many elements. Once finite generation is proven, a natural question arises: how to find generators?

I will overview our results that establish Noetherianity for infinite-dimensional toric varieties, highlight the gap between non-effective and effective theory, and talk about the work in progress on equivariant Groebner bases.

(Based on joint works with Draisma, Eggermont, Hillar, Kahle, and Krone.)