

Lecture: Symmetries in algorithmic questions in real algebraic geometry

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Part II: Symmetries in Polynomial Optimization

In the second lecture we will survey how symmetry-reduction can be used to simplify polynomial optimization problems programs which are invariant by the action of a group. Firstly, we will focus on how to combine methods from invariant theory and representation theory to simplify the sums of squares relaxations. Secondly, we will briefly sketch how knowledge of the stabilizers of optimal points can be used.