

## Algebraic Geometry Seminar

*Generic state polytopes, stability and complexity of computation*

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**Abstract:** We study how state polytopes (from GIT, these tell you whether a given point is semistable or not) change according to the choice of the maximal torus. We define the notion of generic state polytope generalizing the notion of generic initial ideals, and prove that any point is stable with respect to a general maximal torus. This fundamental observation allows one to precisely formulate a conjecture of D. Bayer and I. Morrison about the geometry of the ideal and the computational complexity of its Groebner bases.

Thursday, July 24 at 3:00 PM in SEO 427