



Leibniz
Universität
Hannover

Oberseminar Institut für Algebraische Geometrie

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Combinatorial degenerations and stable rationality of hypersurfaces in projective space

Nicaise–Ottem used combinatorial methods to study rationality of hypersurfaces in tori. They computed the motivic volume of degenerations induced by polyhedral subdivisions of the associated Newton polytope. In this formula, a subpolytope corresponding to a stably irrational hypersurface can obstruct stable rationality, but it is crucial to control the stable birational type of all strata. I will explain a combinatorial criterion that guarantees control of the stable birational types of the strata for a large class of toric varieties. Combining this with the formula of Nicaise–Ottem, and explicit examples of stably irrational hypersurfaces constructed by Schreieder, we obtain many new examples of stably irrational hypersurfaces in projective space.

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Alle Interessierten sind herzlich eingeladen.