Algebraic Geometry
— Seminar —

Polynomial Bridgeland stability conditions and the large-volume limit

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Abstract

Bridgeland's stability conditions are a notion of stability for objects in a triangulated category. While the notion grew out of an attempt to understand mathematically the notion of Π-stability in string theory, this talk will instead motivate them by explaining how stability conditions may help to understand the birational behaviour of the derived category.

We wll introduce polynomial stability conditions, a generalization of Bridgeland's notion. Whereas the existence Bridgeland stability conditions is only known for surfaces and some special cases, we can construct a family of polynomial stability conditions for any projective variety, including a stability condition that should be the large-volume limit of Bridgeland stability conditions.

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