

Conference on birational geometry
“Shokurov 70+1”

May 17 – May 18, 2021

Organizers

Steklov Mathematical Institute of Russian Academy of Sciences, Moscow

Steklov International Mathematical Center, Moscow

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Caucher Birkar

Stable minimal models

In this talk I will introduce the notion of a stable minimal model and give some examples. Next I will discuss their moduli spaces.

János Kollár

Openness of projectivity

Alexander Kuznetsov

Categorical absorption of singularities and nodal nonfactorial Fano threefolds

If X is a threefold with a nonfactorial ordinary double point, we show that there is a semiorthogonal decomposition of the derived category of X with two components, a “small” component responsible for the singularity (we say it “absorbs” the singularity of the derived category of X), and a “big” component that deforms to the derived category of a smoothing of X . We use this construction to relate the derived categories of Fano threefolds of index 2 and degree d to derived categories of Fano threefolds of index 1 and genus $g = 2d + 2$. This is joint work in progress with Evgeny Shinder.

James McKernan

Foliations from the view point of Mori theory

We describe some recent work of Paolo Cascini, Calum Spicer and Roberto Svaldi on foliations on projective varieties. Using ideas and techniques from Mori theory, especially the idea of using log pairs, they are able to give a birational classification of foliations and prove some conjectures on holomorphic foliations.

Dmitri Orlov

Geometric realizations, gluings, and birational geometry

Vyacheslav Shokurov

Moduli part of adjunction

Positivity properties and birational invariance of the upper maximal moduli part of adjunction will be discussed.

David Villalobos-Paz

Rational curves on algebraic spaces

In this talk, I will explain a projectivity criterion for proper algebraic spaces in terms of rational curves. The proof of this criterion hinges on being able to run a relative MMP in which the base is an algebraic space.