An Introduction to Birational Geometry

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Abstract: The major goals of birational geometry of algebraic varieties are to find a good model inside a birational equivalent class and to study the geometry of such models.

Algebraic varieties are roughly classified by their Kodaira dimensions. By looking at Iitaka fibrations, the problem is usually reduced to the following three categories of varieties: varieties of Kodaira dimension minus infinite, varieties of Kodaira dimension zero, and varieties of general type.

In this talk, we will briefly sketch the minimal model program which allows us to find a good birational model and the geometry of the above three categories of varieties.

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