CASTS TALKS

CASTS Algebraic Geometry Summer Program

Surfaces with Kodaira dimension equal 1 or 2

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2018 - 08 - 01 (Wed.) 10:00 - 11:00 103, Mathematics Research Center Building (ori. New Math. Bldg.)

This is the last talk of the series concerning classification of complex algebraic surface. After dealing with ruled surfaces and surfaces with Kodaira dimension zero in the previous talks, we now turn to study the remaining cases: Surfaces of Kodaira dimension equal to one or two. The body of this talk consists of two parts. First, we will discuss surfaces with Kodaira dimension one, and we will prove that every minimal surface with Kodaira dimension one is elliptic surface. Next, we study the surfaces of Kodaira dimension two, known as surfaces of general type, and we give a few examples. Finally, we prove the the Castelnuovo's inequality which states that the Euler characteristic of structure sheaf of general type surfaces is positive.

