

CASTS Algebraic Geometry Summer Program

GAGA principle

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2018 - 08 - 23 (Thu.)

14:00 - 15:00

103, Mathematics Research Center Building (ori. New Math. Bldg.)

In this talk, I will discuss the proof of the GAGA theorem following [1]. First, I will introduce analytic spaces and coherent analytic sheaves. Next, I will start to establish the correspondence between coherent analytic sheaves and coherent algebraic sheaves of projective varieties. Finally, if time permits, I will discuss several applications of the theorem: invariance of Betti numbers under an automorphism of the field of complex numbers, Chow's theorem.

Reference:

[1] Serre, *Géométrie Algébrique et Géométrie Analytique* (1956)



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