

Introduction to GAGA type theorems

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Timetable: 20 hrs. First lecture on November 16th, 2016, 11:00 (dates already fixed see calendar), Torre Archimede, Room 2BC/30.

Course requirements: Basis Commutative algebra. Basic Algebraic Topology. Basic Algebraic geometry and differential geometry.

Examination and grading: the exam will be oral and tailored on the basis of the student's attitude.

SSD: Mat02/03/05/07

Aim: We will introduce some basis tools from classical algebraic geometry to complex analytic spaces. We will try to tailor the class on the basis of the students' attitude.

Course contents: A set characterized as common zeroes of some polynomial in several variables over the complex numbers admits naturally two different topology. One coming from the Algebraic Geometry (the Zariski's one) and one coming from the Analytic Geometry (the transcendental one given by usual Archimedean absolute value). Can we calculate the invariants of the analytic setting via only algebraic setting? And viceversa? This kind of problems is indicated as "GAGA" theorems. We will try to introduce the setting and proving some results