

Algebraic Geometry II

Prof. Dr. Torsten Wedhorn, Prof. Dr. Timo Richarz

Contact

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Time and Place

Tuesdays, 11:40-13:20 in S2|15-401

Wednesdays, 09:50-11:30 in S2|15-401

Starting: Wednesday, 16.10.2019

Additional lectures:

Thursday, 17.10, 13:30-15:10 in S1|02-36

Thursday, 31.10, 13:30-15:10 in S1|02-36

Thursday, 14.11, 13:30-15:10 in S1|02-36

Contents

This course is the continuation of Algebraic Geometry I. We discuss properties of morphisms of schemes (affine, finite, projective, proper, flat, smooth, étale), derived categories and cohomology of quasi-coherent sheaves, and some applications if time permits. Prerequisites are the language of schemes and quasi-coherent sheaves as covered last term.

Literature

- R. Hartshorne: Algebraic Geometry, Springer GTM 52.
- R. Vakil: Foundations of algebraic geometry. Skript
- J. de Jong et. al.: The Stacks Project
- U. Goertz, T. Wedhorn: Algebraic Geometry I, Vieweg.
- Q. Liu: Algebraic Geometry and Arithmetic Curves, Oxford GTM.
- A. Grothendieck, J. Dieudonné: Éléments de géométrie algébrique.

Exercise sheets

- Exercise sheet 1
- Exercise sheet 2

- Exercise sheet 3
- Exercise sheet 4, corrected version from 15.11.2019
- Exercise sheet 5

Exercise session

Mondays, 9:50-11:30 in S2|15-401

Starting: 21.10.2019

There are weekly exercise sessions accompanying the lecture. Solutions to the exercises can be handed in during the lecture on Wednesdays.

Exam

This is an oral exam. For further information contact one of the lecturer.