

MATH-651

Positive characteristic algebraic geometry II (2019)

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Cursus	Sem.	Type
Mathematics		Obl.

Language of teaching	English
Credits	3
Session	
Exam	Oral presentation
Workload	90h
Hours	56
Courses	28
TP	28
Number of positions	15

Summary

This is the second semester of a course on the geometry of algebraic varieties defined over fields of positive characteristic.

Content

The goal of the course is to learn the most possible techniques in positive characteristic algebraic geometry. Examples of such techniques are: techniques connected to Kodaira vanishing and non-vanishing, such as torsor- and semi-positivity-method, bend and break, Keel's lifting statement, Forbenius trace method, generic vanishing in positive characteristic. Students will learn as much of these techniques as possible during a semester. This is the second semester of a course on the same topic. The required background is the first semester of the course, that is, the knowledge of the material of the course "Positive characteristic algebraic geometry".

Keywords

algebraic geometry, positive characteristic

Learning Prerequisites**Required courses**

Algebraic geometry (masters course), Scheme theory (PhD course), Sheaf cohomology (PhD course)

Learning Outcomes

By the end of the course, the student must be able to:

- understand positive characteristic techniques in algebraic geometry

Resources**Bibliography**

provided course notes