ALGEBRAIC GEOMETRY II, MATH 533

- Course: Math 533 (Algebraic geometry II), Term 2, 2020-2021.
- Instructor: Sabin Cautis, Math 116, cautis@math.ubc.ca
- Time: Tuesday and Thursday 9:30-11:00
- Location: ONLINE
- Course website: `http://www.math.ubc.ca/~cautis/math533/`

Synopsis: The main part of the course introduces the language of sheaves and develops its theory and applications. This is followed by a study of sheaf cohomology. These are fundamental tools in algebraic geometry (as well many other areas in geometry and topology) and subsequently leads to the study of derived categories of coherent sheaves. We learn techniques to work with and understand such categories. The course is designed to develop our understanding and intuition for these objects and concepts. Along the way many examples and applications are considered.

Textbook: There is no required textbook but I will be teaching to some degree out of "Algebraic geometry" (by Hartshorne) and later on out of "Fourier Mukai transforms in algebraic geometry" (by Huybrechts). So it might be helpful to have some access to these.

Grades: Evaluation is based on several assignments that help absorb the material. There will be student presentations closer to the end of the term.