

**MATH 595 CP: CLASSIC PAPERS IN ALGEBRAIC GEOMETRY
AND GEOMETRIC REPRESENTATION THEORY, FALL 2016**

Course Meets: 11-12:20 Tu Th,

Instructor: Thomas Nevins (nevins@illinois.edu)

Prerequisites: Math 500; Math 510 or Math 511 or similar background.

Course Web Page: <http://www.math.uiuc.edu/~nevins/courses/aut16/m595.html>

There is much beautiful, important, and even standard work in algebraic geometry and geometric representation theory that is best accessed—or sometimes, can only be accessed—through the primary literature: that is, through journal articles.

This course will help students learn some of that work: the theorems proven; the ideas and insights developed; the strategies and techniques of proof. The course will also teach students to engage productively with journal articles to achieve “general understanding”: not digging deep into absolutely every detail, but grasping the important ideas with a sense that “I could master every detail later if I needed to.”

At the beginning of the semester, Prof. Nevins will lead the class through the study of papers. Prof. Nevins hopes that later in the semester, students will volunteer to lead the study of some papers; if a student chooses to do this, it is expected that the student may want to rely heavily on Prof. Nevins for assistance in preparation, and Prof. Nevins will strive to provide all necessary help to achieve success.

A long, but by no means comprehensive, list of papers that could be covered is growing at the course web page; but students are invited to recommend papers they find worthwhile or that they would like to learn. The precise choices of papers and subjects to be treated in the seminar will be determined by the class, as a group, during the semester.

Students will be expected to do some reading outside of class.

The format of the class will be informal. Students will be expected to ask questions and discuss topics. It is *not* expected that a student leading a discussion will have learned every detail of the paper in question—it is expected that “I don’t know” will always be a valid answer to any question, hopefully leading to a productive and enlightening discussion.