BIOGRAPHICAL FILE BF-8 FOR JASON MICHAEL STARR

1. Teaching Goals

The principles I follow in teaching are simple:

(i) Give students clear goals before all instruction.
(ii) Give students clear summaries after instruction.
(iii) Give students daily practice in newly acquired skills.
(iv) Give students ample opportunity to clearly demonstrate their understanding. This includes giving ample opportunity to correct earlier mistakes and succeed where earlier they failed.

In fact, good organization is the best part of each of these principles. I have been the primary instructor for a number of courses, from MIT's 160-student-strong single variable calculus course to a graduate algebraic geometry topics course.

I also strongly believe that a commitment to undergraduate teaching includes a commitment to developing new and more useful course materials. That is why I have cooperated with MIT's OpenCourseWare project. The OpenCourseWare project aims to make high quality course materials freely available through the internet to all students, with particular focus on students in disadvantaged circumstances and developing nations. I contributed course materials for two courses.

The first course was "Single variable calculus, 18.01". This is the entry-level calculus course at MIT. All students at MIT are required to pass this course or an equivalent in order to graduate. After the original contribution, I revised the course materials. I was told by OCW that my course is among the 15 most accessed courses they provide (e-mail attached). OpenCourseWare also included portions of my course materials in their "Highlights for High School", a project to help high school students and teachers find the OCW content most useful to them.

The second course I contributed was "Honors differential equations, 18.034". This is an honors course at the lower division level in differential equations.

In addition to undergraduate teaching, I also have a strong commitment to graduate teaching, both within my university and also through outreach to other universities. I was a mentor to graduate students at a graduate student workshop, "Learning stacks and computational methods through problem-solving", offered at the University of Illinois, Urbana-Champaign in June 2002. I taught a 3-week graduate *mini-curso* or minicourse on "Geometric Invariant Theory" in January 2005 at IMPA in Rio de Janeiro, Brazil. I presented a 3-lecture short course to graduate students on "Arithmetic over function fields" as part of the Clay Mathematics Institute 2006 Summer School on Arithmetic Geometry in Göttingen, Germany. And I presented a guest lecture in the "Summer Graduate Workshop on Deformation Theory and Moduli in Algebraic Geometry" held at the Mathematical Sciences Research Institute in July 2007.