

DEPARTMENT OF MATHEMATICS

VIGRE Funding Report

(due 30 days after semester of support)

Semester/Summer and Year:

Spring 08

Name: Thomas Occhipinti

List the graduate courses you have taken this semester (including independent studies), your grades, and the instructors:

| Course | Title | Grade | Instructor |
|----------|---------------------------------------|-------|------------|
| Math 518 | Commutative Algebra | A | Castravet |
| Econ 513 | Consumer Economics and Price Analysis | A | Stefanadis |
| Math 599 | Independent Study | S | McCallum |
| | | | |
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List the title, date and location of any talks you have given, either here or elsewhere:

"An Introduction to Graph Theory," April 23, Undergraduate Problem Solving Seminar, University of Arizona

"Low dimensional factors in Jacobians of Curve Towers," Comprehensive Talk, March 21, University of Arizona

If you are working on your dissertation, include a one paragraph description of your research progress. If you have not yet begun dissertation research, describe your progress toward finding a dissertation topic and advisor and beginning that research.

My advisor and I are working on getting the work I did for my comprehensive exam into a publishable form before I begin work on my dissertation. My dissertation will certainly be on a related subject, however.

List publications, if any.

Check all activities you completed during the funded period:

Academics:

- Independent Study
- Oral Comprehensive Exam
- Commence Thesis Research
- Conference attendance
- Conference participation
- Complete PhD

Professional development and outreach:

- AP Calculus Visit
- High School Workshops
- Undergraduate Research Project
- Undergraduate Research Seminar
- Super TA
- Mentoring junior graduate students for the qualifying exams
- RTG (help organize)
- Research Seminar (help organize)

Other (please specify)

Attach a brief statment about your academic progress and professional development during the period of support.

Spring VIGRE Report for Thomas Occhipinti

This semester has been productive for me. I have continued Super TAing for the algebra class, and my discussion sections have continued to be well attended, which I take as a very good sign. This is especially helpful since I am also leading the qualifying exam review in algebra, and I think knowing the students well will be a huge advantage.

By far the bulk of the first half of my semester was spent writing and editing my paper for my comprehensive exam. This involved a lot of going back and filling in gaps in my knowledge, particularly about abelian varieties and jacobians. I learned most of what I needed about these topics from articles written by JS Milne. On March 21st my committee (Douglas Ulmer, Dinesh Thakur, Jing Long Hoelscher, and David Savitt) assembled for the oral part of my comprehensive exam. I completed it successfully.

Since my comprehensive I have been working closely with my advisor to generalize the results of my comprehensive paper. We have been somewhat successful in this endeavor, but there are still some obstacles to clear before we can publish the results, which is our goal.