

DEPARTMENT OF MATHEMATICS

VIGRE Funding Report**(due 30 days after semester of support)****Semester/Summer and Year:**

Spring 2008

Name: Rebecca Stockbridge

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

Course	Title	Grade	Instructor
Math 527b	Principles of Analysis	A	S. Venkataramani
Math 575b	Numerical Analysis	A	J. Restrepo
Math 583b	Principles and Methods of Applied Mathematics	A	H. Flaschka
Math 586b	Case Study in Applied Mathematics	A	A. Goriely

List the title, date and location of any talks you have given, either here or elsewhere:

The Binomial Model for Option Pricing
 May 16, 2008
 University of Arizona
 (Requirement of Math 586b)

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.

I will be working with Prof. Joanna Masel in Evolutionary Biology for my third semester RTG project.

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.

This semester I continued with Principles of Analysis (Math 527b), Numerical Analysis (Math 575b), and Methods (Math 583b). I enjoyed learning new topics such as distributions and measure theory, and I am looking forward to assimilating all these ideas through a summer of studying for the qualifying exams. I also attended weekly talks introducing various research possibilities, and as a result, I will be working with a professor in Evolutionary Biology next semester.

For my term paper, I looked at the binomial model for option pricing in a simple framework. I found this taste of financial mathematics very interesting, especially since this branch of mathematics was developed with particular applications in mind. The study of this topic has reinforced the desire that I have to focus on a probabilistic area for future research.

Again, not having to teach was very much appreciated. I was able to work hard at the core courses and spend a significant amount of time on the term paper. I am pleased with my progress this year and am looking forward to next semester, particularly the research project.