

VIGRE Report - Fall 2004
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Progress on dissertation research and talks given

As a second year graduate student, I received VIGRE funding during the Fall 2004 semester. I entered the Program in Applied Mathematics with an unconventional background, and am consequently completing the sequence of Core classes over two years, rather than the customary one. I will take my PhD qualifying exams for the first time in August of 2005. As a VIGRE fellow during the Fall 2004 semester, I was able to devote much energy to learning the fundamentals taught in the Core Analysis and Methods classes. In addition, under the supervision of Mac Hyman and Juan Restrepo, I researched the behavior of solutions to a nonlinear, dispersive PDE. I presented some of our results at the Second Year Research Conference hosted by the Applied Mathematics Department in December of 2004. Finally, I met with several Professors to explore possible directions that my dissertation research may take. Thanks in part to the VIGRE funding, I expect to be very prepared to take my qualifying exams in August, and to directly involve myself in the research that will lead to my dissertation.

Courses taken

I completed the following 12 credits during the Fall of 2004.

MATH527A Principles of Analysis

grade: A

MATH583A Principles and Methods of Applied Mathematics

grade: B

MATH577 Topics in Applied Mathematics (Fourier Analysis)

grade: A

MATH599 Independent Study with Juan Restrepo

grade: S

Vertical integration activities

Inspired in part by the ideal of "Vertical Integration" in Mathematics, I have developed a relationship with City High School, a new charter school in downtown Tucson. Since mid-August of 2004, I have made myself available for a minimum of one hour each week as a math tutor for struggling students. This has given me insight into Math Education at the high school level, as well as experience teaching the subject. I have had the satisfaction of seeing several students who had given up on understanding math begin to try again when I presented the concepts in a new way. During the coming Spring 2005 semester, I will sustain my relationships with these students and continue to tutor at City High.