

RICARDO BETANCOURT - BENITEZ

OBJECTIVE

Graduate Research Assistant Position

EDUCATION

- 2003–Present University of Rochester Rochester, NY
- Ph. D. Studies.
- 2001-2003 University of Notre Dame Notre Dame, IN
- Master of Science, Physics
- 1999-2001 University of Southern California Los Angeles, CA
- Bachelor Of Arts, Physics
 - Minor, Mathematics and French

RELEVANT COURSE WORK

General Graduate Physics Courses*:

Quantum Mechanics (4), Classical Mechanics (1), Classical Electrodynamics (2), Statistical Mechanics (1), Methods of Theoretical Physics (2), Methods of Experimental Physics (1).

Specialty Graduate Courses*:

Medical Optics (1), Biomedical Ultrasound (1), Medical Imaging-Theory and Implementation (1), Acoustics Waves (1), Atomic Physics (1), Astrophysics (1), Nuclear Physics (1), Condensed matter Physics (1), General Relativity (1).

*Number in parenthesis shows the number of semesters taken for that particular course.

EXPERIENCE

- 2004–Present University of Rochester Rochester, NY
- Research Assistant*
- Ultrasound Research Laboratory*
- Simulations of scatterings of a plane wave by a cylinder and by a sphere using Matlab software.
 - Simulations of scatterings of a focused wave by a cylinder and by a sphere using Matlab software.
 - Simulations of scatterings of a focused temporal Gaussian pulse by a cylinder and by a sphere using Matlab software.

2003–2004 University of Rochester Rochester, NY

Teaching Assistant

Physics and Astronomy Department

- Recitation leader and a Grader

In charge of giving a recitation twice a week and grading homework sets every other week. I held office hours to answer and clarify lectures notes.

- Laboratory leader

In charge of giving a small lecture before each lab explaining the procedure and the conceptual physical phenomena related to each lab.

2001–2003 University of Notre Dame Notre Dame, IN

Teacher Assistant

Physics and Astronomy Department

In charge of assisting Professors in their course load. Teaching assistant's duty varied according to the professors' needs and to the subject matter taught.

INTERESTS

I am interested in applying Physics concepts into medical problems. From my specialty courses, I have been acquainted to medical imaging in different modalities from X-ray to CT. A part that calls my attentions is that by imaging a part of the body, it is possible to diagnose some disease such as cancer and it can also help in the treatment process making medical imaging twice as helpful. Although the material from those courses was quite basic, I feel that there are many potential and interesting research areas in which I would be greatly interested. Yet, my interests do not only fall in medical imaging, I am also excited by several uses of physics knowledge to treat such diseases. For instance, while I was taking my medical ultrasound and optics courses, I realized that ultrasound was useful for other things than to determined the sex of a baby and light was not only useful to light up a room. Ultrasound can be used to treat different kinds of disease as osteoporosis and arthritis, and light has the potential to image as well as treat and cure cancer such as in Photodynamic Therapy. Overall, the medical field and its uses of Physics concepts have always fascinated me.

SKILLS AND ABILITIES

Languages: Spanish, French, and English.

Computer Skills: Matlab, Mathematica, LaTeX, and willing and ready to learn more.