

# Maria Isabel Restrepo

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## Research Interests

Computer vision and machine learning: 3D object recognition, compositional learning, 3D reconstruction, Bayesian learning of 3D world surface's appearance and geometry from images.

## Education

**Brown University** - Providence, RI

Ph.D Student Division of Engineering, 2006-present

**Trinity College**, Hartford, CT

B.S with Honors Electrical Engineering, May 2006

## Experience

### **Brown University - Providence, RI**

#### **Research Assistant - 2006-present**

Research assistant and software developer for Computer Vision applications under the guidance of Professor Joseph Mundy.

#### **Teaching Assistant: Scientific Programming in c++ - 2008**

Teaching Assistant for graduate level course. Held help sessions and graded c++ homework projects

### **Trinity College - Hartford, CT**

#### **Research Assistant - Howard Hughes Medical Institute (HHMI)**

Developed a micro controller system to collect and classify respiratory signals from young adults. Using fuzzy logic, respiratory signals were classified as normal, respiration with artifacts or apnea. This research was conducted under the guidance of Prof. Taikang Ning.

#### **Teaching Assistant: Introduction to Engineering Design - 2005-2006**

Under the guidance of Prof. David Ahlgren, helped undergraduate students design fire-fighting robots. Held weekly lab sessions where students were introduced to basic electrical, mechanical and programming challenges behind robotics.

#### **Residential Assistant - 2003-2006**

Helped community development by planning activities within the residence halls, providing peer advice, and general assistance with community living matters.

#### **Co-Chief Engineer, Robot Study Team. Engineering Department - 2006**

Helped directing and guiding a group of electrical, mechanical and computer engineers to design and build autonomous robots. Under the guidance of Prof. David Ahlgren, this group competed at the Trinity Fire-Fighting Contest and at the DARPA-AUVIS Intelligent Ground Vehicle Competition (IGVC)

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### **Captain of Trinity Women's Squash Team - 2006**

Conducted team practices. Provided athletic and personal support, guidance and inspiration to the team members.

## **Honors/Awards**

### **Phi Beta Kappa Society - 2006**

Academic Honor Society

### **NCAA Winter Postgraduate Scholarship - 2006**

Award granted to top student/athletes in intercollegiate athletics. First squash player to receive award and first female awardee at Trinity College

### **Trinity Susan A. Martin Award - 2006**

"Outstanding Student-Athlete" Award presented annually to the senior woman who combined excellence on the fields of competition with excellence in the classroom.

### **President's Fellow in Engineering at Trinity College- 2005-06**

Awarded to the top student in Engineering. President Fellows meet with the president of the college and faculty to discuss topics of interest.

### **New England Small College Athletic Conference All-Academic honor - 2002-2006**

## **Research Activities**

### **Software Development:**

*Developer*, VXL - Computer Vision Libraries - 2002-present

### **Professional Societies:**

*Member*, Institute of Electrical and Electronics Engineers (IEEE) - 2008-present

### **Committees:**

*Member*, Trinity College Engineering Advisory Committee (TEAC)- 2007-2008

*Judge*, Robotics Park Event, East Providence, RI - 2009

## **Technical Expertise**

Programming: C++, C, Matlab, Cmake, Python, LabView

Software Development: VXL - Computer Vision Libraries

Platforms: Mac OSX, Windows, Linux

## **Other Interests**

Squash Player - Part of Colombia's National Team 1999-2007. Currently, Rhode Island Women's Champion

Yoga, biking, sailing.