

Amanda Gaudreau Balderrama

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EDUCATION

MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT)

Cambridge, MA

Candidate for Masters of Electrical Engineering

June 2010

- VI-A Industrial Masters Program with Medtronic, Inc.
- Thesis: Adaptive Modification of Spinal Cord Stimulator Therapy Parameters using Triaxial Accelerometer Data

Bachelor of Science in Electrical Engineering

GPA: 4.6/5.0

June 2009

- Emphasis in Bioelectrical Engineering and Communication, Control and Signal Processing

UNIVERSIDAD COMPLUTENSE DE MADRID

Madrid, Spain

MIT Madrid Program

Spring Semester 2007

- Completed two technical courses and two humanities courses in Spanish

WORK EXPERIENCE

MEDTRONIC, INC. - NEUROMODULATION

Minneapolis, MN

Technology Intern

June 2009 – Present

- Designing an algorithm for closed-loop functionality of a stimulation device using accelerometer data
- Characterized pain patient posture behavior by clustering accelerometer data using methods such as unsupervised learning and visual 2-D/3-D density representations

Technology Intern

Summer 2008

- Conditioned triaxial accelerometer data for analysis
- Developed tools in MATLAB to assess the accuracy and performance of a posture detection algorithm

GENERAL ELECTRIC – TRANSPORTATION

Erie, PA

Control Electronics Intern

Summer 2007

- Evaluated reliability of a locomotive panel in failure mode by simulating circuit and calculating reliability of circuit components
- Contributed to the completion of specification documents by acquiring measurements, performing tests, constructing diagrams, and writing functional descriptions

THE BROAD INSTITUTE OF HARVARD AND MIT

Cambridge, MA

Research in Bioinformatics

June – December 2005

- Extracted relevant data from genome files using Perl to justify biological pressure for CpG mutations

EXTRACURRICULARS AND INTERESTS

- **President (2008-2009), Treasurer (2007-2008)** – Latino Cultural Center
- **Student Member:** Society of Hispanic Professional Engineers, Society of Women Engineers, MIT Outdoors Club, IEEE
- **Tutoring/Mentoring Positions:** After School Program Science Curriculum Developer (IAP 2009), Undergraduate Math Tutor (Fall 2006), SAT Math Tutor (Spring 2008), Science Technology Engineering Math Program Mentor (2006,2008), Minority Introduction to Engineering and Science Program Teaching Assistant (Summer 2006)

PUBLICATIONS

M. Yip, D. He, E. Winokur, A. Gaudreau Balderrama, "A Flexible Pressure Monitoring System for Pressure Ulcer Prevention," IEEE Engineering in Medicine and Biology Conference, Sept. 2009 Student Paper Award, 2nd Place.