

## EDUCATION

<b>PhD Student in Bioengineering</b> Stanford University, Stanford, CA	Sep. 2015 – present GPA: 3.904
<b>Bachelor of Science in Biochemistry</b> Boston College, College of Arts & Sciences, Chestnut Hill, MA	May 2015 GPA: 3.848
<b>Study Abroad:</b> Marine Ecology, Galápagos Academic Institute for the Arts & Sciences <b>Skills:</b> Spanish, PADI Open Water Dive Certification, Marine Research Techniques	GPA: 4.000 Jan. 2014 – May 2014

## DISTINCTIONS

Stanford Society of Women Engineers Travel Grant, Dean's Scholar, Alpha Sigma Nu Honor Society Member, Dean's List First Honors, Kozarich Fellowship, Global Changemaker Scholar, Honors Chemistry Track, Sophomore Scholar, Sr. Thea Bowman AHANA Scholar (Minority Distinction), The President's Volunteer Service Award (Silver)

## RESEARCH EXPERIENCE

<b>Graduate Research</b> Primary Advisor: Scott Delp	Sep. 2015 - present July 2016 - present
<u>Developing neuro-biomechanical algorithms for adaptive DBS for gait abnormalities in Parkinson's Disease</u> Record and analyze bilateral local field potentials from the subthalamic nuclei of patients with Parkinson's Disease via deep brain stimulation electrodes and correlate with various biomechanical markers obtained through wearable sensors. These shall inform the creation of neuro-biomechanical algorithms in closed loop deep brain stimulation (DBS) as well as powerful biomechanical models made using OpenSim software.	
<b>Laboratory Rotations 2015-2016</b> Advisor: Lisa Giocomo	Neurobiology Laboratory, Stanford University, CA
<u>Characterizing theta waves in HCN2-knockout mice</u>	Sep. 2015 – Dec. 2015
Investigating place cells and theta waves in HCN2-knockout mice with electrophysiology techniques. Advisors: KC Huang, Justin Sonnenburg	Bioengineering, Microbiology, Stanford University, CA
<u>Effect of diet on spatial organization of gut bacteria</u>	Jan. 2016 – Apr. 2016
Investigating bacterial spatial organization in gut of conventional mice on different diets. Advisor: Justin Gardner	Psychology-Neuroscience, Stanford University, CA
<u>Automation of ROI Selection for Retinotopy</u>	April 2016 – July 2016
Using MATLAB to automate accurate mapping of visual cortex using fMRI data and underlying anatomy.	
<b>Undergraduate Student Research</b> Advisor: Dr. Eranthie Weerapana	Jan. 2013 – May 2015 Biochemistry Laboratory, Boston College, MA
<u>Project 1: Lysine-mediated enzyme activities</u>	Jan. 2013 – Dec. 2013
Organic synthesis and molecular biological laboratory techniques employed in the creation and screening of lysine-specific molecular probe library. Presented work at biannual Undergraduate Research Fair.	
<u>Project 2: Structure Activity Relationship Studies</u>	May 2014 – Sep. 2014
Optimize specificity of a small molecular probe with cysteine reactivity through structural modifications using organic synthesis techniques and biological screens to monitor activity	
Advisor: Dr. Joseph Burdo	Neuroscience Laboratory, Boston College, MA
<u>Project 1: Computational and mechanical models of reflex circuits</u>	Sep. 2014 – May 2015
Using Arduino circuit board and mechanical parts to construct electrical analog of neuronal circuitry and muscle systems involved in various human reflex pathways including corneal reflex.	

## LABORATORY SKILLS

Column chromatography, NMR Spectroscopy, Cell culture, Organic Synthesis, UV-VIS, Agarose Gel Electrophoresis, SDS-PAGE, Western Blotting, Mouse care/handling, Electrophysiology, MATLAB

## OTHER EXPERIENCE

- Substitute Teacher**, Old Rochester Regional Public Schools, MA Jan. 2013 – June 2013  
❖ During winter and summer university recesses, substitute taught grades K-6 and worked one-on-one with children who had varying degrees of Asperger's & Autism
- Lifeguard**, Southcoast YMCA, Mattapoisett, MA June 2014 – Aug. 2015  
❖ Maintain and ensure safety of those utilizing outdoor swimming pool
- Track Coach**, Mattapoisett Track Club, Mattapoisett, MA June 2008 – Aug. 2013  
❖ Coached children ages 3-12 in various track and field events during the summer

## VOLUNTEERING & ACTIVITIES

- Tour Guide**, Boston College Student Admission Program Jan. 2012 – May 2015
- Student Mentor**, BC Women in Science & Technology Jan. 2013 – May 2015  
❖ Demonstrate and teach scientific laboratory practices to female high school students
- Student Member**, American Chemical Society Chapter Sep. 2014 – May 2015
- Leader**, Every Bite Counts Club: repackaging leftover dining hall food for donation Sep. 2012 – May 2015
- Volunteer**, Boston College Campus School Marathon Team Sep. 2011 – May 2015
- Student Professor**, Boston College Splash Program: taught classes on marine life Sep. 2012 – May 2015
- Executive Board Member**, Church in the 21<sup>st</sup> Century Jan. 2013 – May 2015
- Soup Kitchen Volunteer**, St. Anthony's Dining Room, Palo Alto, CA Sep. 2015 – present
- Student Teacher & Volunteer**, Stanford Splash Program Sep. 2015 – present
- Student Member & Volunteer**, Stanford Women in Engineering, Stanford, CA Sep. 2015 – present
- Science Editor & Blogger**, The Dish on Science, Stanford University, CA Jan. 2016 – present
- Science Fair Judge**, Santa Clara County Science Fair, Santa Clara, CA April 2016
- Lucile Packard Children's Hospital Volunteer**, Stanford, CA August 2016 - present
- Student Mentor**, Stanford Biosciences Student Association, Stanford, CA Sep. 2016 – present
- Student Mentor**, Stanford Women Engineers Corporate Mentorship Program, CA Sep. 2016 - present
- Student Affiliate**, Mind, Brain, & Computation, Stanford, CA Sep. 2016 – present