

# ANTHONY HAI LE

## CONTACT INFORMATION

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## EDUCATION

*Doctor of Philosophy* Sept 2016–Present **Oregon State University, Corvallis, OR**  
School of Chemical, Biological, and Environmental Engineering (CBEE)  
Major: *Bioengineering*  
Thesis: *TBD*  
Description: TBD  
Advisors: Drs. Ravi BALASUBRAMANIAN & James D. SWEENEY  
Thesis Committee: Drs. Adam HIGGINS, V. John MATHEWS & Graduate Committee Representative

*Bachelor of Science* Sept 2011–May 2015 **Wofford College, Spartanburg, SC**  
Department of Chemistry  
Major: *Chemistry*  
Minor(s): *Mathematics & Biology*  
Academic Advisor: Dr. Charles BASS

## PROFESSIONAL EXPERIENCE

*Graduate Research Assistant* Sept 2016–Present **Oregon State University, Corvallis, OR**

- Fields of study includes musculoskeletal modeling, biomechanics, muscle mechanics/physiology, and intramuscular application of functional electrical stimulation (FES).
- Facilitate live animal studies with biomechanists, engineers, hand surgeons, veterinary surgeons, and lab animal scientists.
- Contribute to a DoD CDMRP funded multi-disciplinary project aimed at developing a passive implantable orthopedic mechanism for tendon transfer surgery in the hand/wrist.
- Collaborate and coordinate with faculty, staff scientists, surgeons, and graduate students across OSU colleges/departments, University of Southern California, and University of Washington.

**Affiliation:** Robotics and Human Controls Systems (RHCS) Laboratory  
**PI:** Dr. Ravi BALASUBRAMANIAN · [ravi.balasubramanian@oregonstate.edu](mailto:ravi.balasubramanian@oregonstate.edu)

*Undergraduate Research Assistant* Apr–Sept 2016 **Oregon State University, Corvallis, OR**

- Developed the experiment design to quantify the composition of linalool and 1-octen-3-ol in green bean varieties and characterize their sensory science.
- Quantified the relationship between the volatile organosulfur compounds content of vegetable products and their acceptability by primary school children.

**Affiliation:** Sensory Science Laboratory  
**PI:** Dr. Elizabeth TOMASINO · [elizabeth.tomasino@oregonstate.edu](mailto:elizabeth.tomasino@oregonstate.edu)

*Research Chemistry Intern* Jun–Nov 2015 **E & J Gallo Winery, Modesto, CA**

- Analyzed the organic chemistry of grapes using FT-IR and FT-NIR spectroscopy.
- Isolated and purified polysaccharides from wines and grape pomace for value-added mouthfeel projects.
- Used a resin column to extract quercetin glycosides and other polyphenols from Muscat grape juice for product development projects.

**Affiliation:** Research Chemistry Laboratory  
**Mentor:** Dr. Robert SUI · [qiang.sui@ejgallo.com](mailto:qiang.sui@ejgallo.com)

*QA/QC Lab Intern* Mar–May 2015 **RJ Rockers Brewery, Spartanburg, SC**

- Performed quality assurance tests on water, liquor, wort, brewing yeast, and final products.

- Checked gravity of beer throughout the fermentation process daily.

Sept 2012–May 2015      **Wofford College, Spartanburg, SC**

*Chemistry Peer Tutor*

- Tutored 6-8 General Chemistry and Organic Chemistry students per week (20 hrs/wk).
- Focused on problem sets dealing with mechanisms, calculation techniques, and general concepts.

Jun 2013–May 2014      **Wofford College, Spartanburg, SC**

*Undergraduate Teaching Assistant*

- Assisted in facilitating Organic Chemistry labs and graded student lab reports.

Sept–Dec 2013      **Wofford College, Spartanburg, SC**

*Undergraduate Research Assistant*

- Aided in developing methods to extract and quantify free fatty acid compounds of corn oil and olive oil generated by the enzymes in saliva of the human oral cavity.

**Advisor:** Dr. Bryan SPLAWN · [splawnbg@wofford.edu](mailto:splawnbg@wofford.edu)

## JOURNAL PUBLICATIONS

2017

*Journal of Investigative Surgery*

G.R. Browning, **A. Le**, J. Warnock, and R. Balasubramanian, "An Investigation of a Novel Tendon Transfer Surgery for High Median-Ulnar Nerve Palsy in a Chicken Model," *Journal of Investigative Surgery*, 1-9, October 2017.

## CONFERENCE PUBLICATIONS

2017

*Military Health Systems Research Symposium*

**A. Le**, D.S. Russell, J. Warnock, M.K. Larson, G.R. Browning, K.A. Fischer, J.D. Sweeney, and R. Balasubramanian, "Histopathological Healing Responses to a Novel Tendon-Transfer Surgery in a Chicken Model, in Proc. Military Health Systems Research Symposium (MHSRS)," Kissimmee, FL, August 2017.

*Northwest Biomechanics Symposium*

**A. Le**, G.R. Browning, J. Warnock, J.D. Sweeney, and R. Balasubramanian, "Evaluation of Gait Quality for a Novel Tendon-Transfer Surgery in a Chicken Model," Northwest Biomechanics Symposium (NWBS), Eugene, OR, May 2017.

*Veterinary Orthopedic Society*

**A. Le**, J. Casebier, J. Mandich, J. Warnock, J.D. Sweeney, and R. Balasubramanian, "Evaluation of Postoperative Healing for Novel Tendon-Transfer Surgery using an Implantable Passive Mechanism: A Pilot In Vivo Study," in Proc. Veterinary Orthopedic Society (VOS) Conference, Snowbird, UT, March 2017.

*Orthopaedic Research Society*

**A. Le**, D.S. Russell, M.K. Larson, J. Warnock, G.R. Browning, K.A. Fischer, J.D. Sweeney, and R. Balasubramanian, "Histopathological Analysis of Healing Responses to a Novel Tendon Transfer Surgery in a Chicken Model," Orthopaedic Research Society (ORS) 47th Int. Musculoskeletal Biology Workshop, Sun Valley, ID, August 2017.

## PROJECTS

2017

*Research*

Electro Winding Machine for Stimulating Electrode Designing

Animal Cadaver Testbed for Tendon Actuation

*Coursework*

Implementation of Convolutional Neural Networks (CNNs) for Iceberg Classification in Satellite Radar Data (<https://www.kaggle.com/c/statoil-iceberg-classifier-challenge>) – CS 534: Machine Learning

Semi-Autonomous Mobile Robot for Jenga Gameplay

(<https://sites.google.com/view/team7robotics-spring17>) – ROB 521: Applied Robotics

Trajectory Optimization of Human Arm Reaching Model in OpenSim – ROB 562: Human Control Systems

Safe Feedback Motion Planning with Unknown Dynamics for Car Model in MATLAB – ROB 534: Sequential Decision making in Robotics

#### HONORS & AWARDS

2017

*Orthopedic Research Society*

Blue Ribbon Poster Award, 47<sup>th</sup> Int. Musculoskeletal Biology Workshop at Sun Valley

#### UNIVERSITY / COLLEGE / DEPARTMENT SERVICE

2017-Present

*Co-President & Founder*

Robotics Graduate Student Association (RGSA)

*Bioengineering Chairman*

CBEE Graduate Student Association

#### PROFESSIONAL DEVELOPMENT ACTIVITIES

2017

CBEE 507 Seminar Course, Oregon State University

NSF Graduate Research Fellowship Program Workshop, Oregon State University

#### PROFESSIONAL SOCIETY MEMBERSHIPS

2017-Present

*Member*

Orthopaedic Research Society (ORS)

2011-2015

*Member*

American Chemical Society (ACS)

#### TECHNICAL SKILLS

##### *Software*

*Basic*

Robot Operating System (ROS), Adobe Illustrator, Photoshop & Lightroom, Seg3D, FEBio, Slicer

*Intermediate*

PYTHON, MATLAB, L<sup>A</sup>T<sub>E</sub>X, SolidWorks, ADInstruments LabChart, Linux

*Advanced*

Autodesk Fusion 360 & Inventor, Microsoft Windows & Office Suite, Apple macOS

##### *Laboratory Equipment*

*ADInstruments*

PowerLab 8/35

*Tektronix*

TBS 1052B

*A-M Systems*

Model 3800 MultiStim: 8-Channel Stimulator

*Aglient*

GC-MS System, UV-Vis Spectrophotometer

*Bruker*

Alpha FT-IR Spectrometer, Tensor 27 FT-IR Spectrometer, Matrix-I FT-NIR Spectrometer

*Miscellaneous*

AIM3300 Autosampler, Hamilton Microlab NIMBUS, Hamilton Syringe Pump, Light Microscope,

Vacuum Oven, Hydrometer, Lyophilizer, Rotary Evaporator, Centrifuge, Dialysis Filtration, Cell Culture

*Additional*

PADI Open Water Certified

**VOLUNTEER EXPERIENCE**

*Apr 2016-Present*

WeDo Lego Robotics, STEM Academy

*Apr-Sept 2016*

Boys & Girls Club of Corvallis, Corvallis, OR

Makers Club, Corvallis Public Library

*Spring 2013, 2014, 2015*

Relay for Life, Wofford College

*Jan 2013, 2014*

Habitat for Humanity, Spartanburg, SC

*Interests*

Hiking · Trail Running · Camping · Mountain Biking · Rock Climbing