

# Austin Lee

www.linkedin.com/in/austin-lee-53a524126

(949) 648-6813 – aylee3816@gmail.com – 62 Harrison, Irvine, CA 92618

## Education

**Bachelor of Science:** University of California, Los Angeles – Bioengineering: *September 2014 – Expected Graduation: June 2018*

GPA: **(Fall 2017) - 3.556** (Dean's Honor List - Fall 2014, Spring 2016)

## Research & Work Experience

### **Undergraduate Research Assistant: (January 2016 – Present)**

*Di Carlo Laboratory – Microfluidic Biotechnology* (University of California, Los Angeles)

- Working alongside a Ph.D student on a project to determine the effect of viscosity and viscoelasticity on the lateral migration of microfluidic droplets generated with solutions containing polymers, DNA, and cell lysate
- Provide support with designing microfluidic devices in AutoCAD and employing standard soft lithography techniques to fabricate PDMS chips used in experiments
- Develop and troubleshoot experimental protocols to optimize our automated passive droplet sorting system thus minimizing droplet loss and lag time between each stage
- Perform rheometric analysis on droplet solutions to characterize their dynamic fluidic properties and analyze droplet migration paths using MATLAB and ImageJ

### **Senior Capstone Design Project: (September 2017 – Present)**

*Seidlits Laboratory* (University of California, Los Angeles)

- Aim to develop a model for Traumatic Brain Injury (TBI) using a microfluidic parallel plate flow chamber
- Adopted the lead role of designing our group's flow chamber in Solidworks and then modeling it in COMSOL to deliver target shear stresses on seeded astrocytes to simulate TBI

### **Mechanical Engineering Intern: (June 2017 – Present)**

*Southwest Group Engineering Consultants* (Irvine, CA)

- Developed T-24 Energy Code Compliance Models for both residential and non-residential projects
- Modeled energy load calculations using Wrightsoft Manual JDS software and Energypro
- Utilized AutoCAD to setup building plans and draft HVAC systems

## Skills

**Software:** AutoCAD, MATLAB, Solidworks, COMSOL, Inkscape, ImageJ, Arduino, EnergyPro, Microsoft Office

**Techniques:** Microfluidics, Cell Culture, Bioconjugation, Bright Field/Fluorescence Microscopy, Rheology, Soft Lithography, Contact Angle Measurements, Breadboarding, Administrative Assistance (Filing, Time Sheets etc.)

### **Relevant Coursework:**

- Bioengineering Thermodynamics, Transport Phenomena, Bioengineering Lab Techniques, Biomedical Transducers, Tissue Engineering, Biomaterials, Principles of Biocompatibility, Bioinstrumentation Circuits
- Economics for Engineers, Introduction to Finance and Marketing, Business Law, Engineering Ethics
- Single/Multi-Variable Calculus, Linear Algebra, Differential Equations, General Chemistry/Lab, Organic Chemistry/Lab, Introductory Physics Series/Lab, Life Science Core/Lab, MATLAB, Materials Science

## Activities

### **UCLA Biomedical Engineering Society (BMES): (September 2014 - Present)**

- **Historian** (2015-2016) \ \ **Secretary** (2016-2017)
  - Took photographs for the club website, compiled weekly newsletter, and recorded meeting minutes

### **UCLA Badminton Club Team: (September 2014 - Present)**

- **Co-Captain (2015 – 2017) & Club Officer (2015-Present) – Equipment Manager, Treasurer, Social Chair**
  - Lead team practices and organized tournament lineups, social events, and a yearly club retreat
  - Coordinate total team equipment inventory and maintain proper equipment use
  - Administrate team finances for equipment, sponsorship, and travel
- USA Badminton Collegiate Nationals 2015 – Mens Doubles 2<sup>nd</sup> Place (Individual)
- USA Badminton Collegiate Nationals 2016 – Mens Doubles 3<sup>rd</sup> Place (Individual)