

AVA CHEN

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EDUCATION

Columbia University

Ph.D in Mechanical Engineering

Advisor: Matei Ciocarlie

◇ Columbia University Presidential Fellow

2019 - 2024 (expected)

New York, NY

Massachusetts Institute of Technology (MIT)

B.S. in Mechanical Engineering – GPA 4.3/5.0

Thesis: "Effectiveness of Active Cooling on Torque Performance for Prosthetic Applications"

June 2017

Cambridge, MA

PUBLICATIONS

Cervantes T., Byun W., **Chen A.**, Kim K., Nealon K., Connor J., Slocum A. "A Device for Quantitative Analysis of the Thumb Ulnar Collateral Ligament". ASME. Frontiers in Biomedical Devices, *2018 Design of Medical Devices Conference*. (2018).

Departmental & Colloquia Talks

"How jumping spiders use silk to orient themselves in midair." Bauer Forum. Harvard, Cambridge MA. Oct 2018

"How Jumping Spiders Jump." CEE 35th Anniversary Celebration. Broad Institute, Cambridge MA. Oct 2018

RESEARCH & WORK EXPERIENCE

Columbia Dept. of Mechanical Engineering, Robotic Manipulation & Mobility Lab

Graduate Researcher with Dr. Matei Ciocarlie

2019 - present

New York, NY

Harvard Dept. of Organismic & Evolutionary Biology, Shamblé Lab

Research Assistant with Dr. Paul Shamblé

2017 - 2019

Cambridge, MA

Dephy, Inc.

Mechanical Engineering Intern

Summer 2017, 2018

Maynard, MA

MIT Media Lab, Biomechatronics Group

Undergraduate Researcher with Dr. Hugh Herr, Arthur Petron, & Matt Carney

2013 - 2017

Cambridge, MA

Apple Inc.

Product Design Validation Engineer Intern

Summer 2016

Cupertino, CA

Formlabs

Mechanical Engineering Intern

Summer 2015

Somerville, MA

TEACHING EXPERIENCE

Teaching Assistant, Columbia MECE E4602 - Introduction to Robotics

Fall 2020

Lab Assistant, Harvard LS50 - Integrated Science

Spring 2018, Spring 2019

SIDE PROJECTS / OTHER PUBLICATIONS

Untethered Gait Tracking for Rehabilitation

Collaboration with FIGUR8, Inc. to use their wearables platform for monitoring gait trends during self recovery & long-term effects of rehabilitation post knee-reconstruction surgery.

2018 - present

East Campus Roller Coaster

Headed design, calculations, construction, and operation of the 2015 record-breaking wooden roller coaster. Formed and led team of students to complete \$15,000 construction project in 8 days.

2015

SKILLS

Hardware Tools

Mill & Lathe, CNC Router, Laser Cutter, Waterjet, FDM/SLA 3D Printing, SMD Soldering/Rework, PCB Layout, Instron, Woodworking Tooling

Software & Languages

Python, C++, Matlab, Altium, Eagle, Solidworks, NX, Rhino, LabView