AVA CHEN

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EDUCATION

Columbia University **2019 - 2024 (expected)**
Ph.D in Mechanical Engineering *New York, NY*
Advisor: Matei Ciocarlie
◇ Columbia University Presidential Fellow

Massachusetts Institute of Technology (MIT) **June 2017**
B.S. in Mechanical Engineering – GPA 4.3/5.0 *Cambridge, MA*
Thesis: "Effectiveness of Active Cooling on Torque Performance for Prosthetic Applications"

PUBLICATIONS

Meeker, C., Fraser, M., Park, S., **Chen, A.**, Weber., L.M., Miya, M., Stein, J., & Ciocarlie, M. "Semi-Supervised Intent Inferral Using Ipsilateral Biosignals on a Hand Orthosis for Stroke Subjects". In *Robotics and Automation (ICRA), 2021 IEEE International Conference on.* IEEE. (2021). Manuscript Under Review.

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).

RESEARCH & WORK EXPERIENCE

Columbia Dept. of Mechanical Engineering, Robotic Manipulation & Mobility Lab **2019 - present**
Graduate Researcher with Dr. Matei Ciocarlie *New York, NY*

Harvard Dept. of Organismic & Evolutionary Biology, Shamble Lab 2017 - 2019
Research Assistant with Dr. Paul Shamble *Cambridge, MA*

Dephy, Inc. Summer 2017, 2018
Mechanical Engineering Intern *Maynard, MA*

MIT Media Lab, Biomechatronics Group 2013 - 2017
Undergraduate Researcher with Dr. Hugh Herr, Arthur Petron, & Matt Carney *Cambridge, MA*

Apple Inc. Summer 2016
Product Design Validation Engineer Intern *Cupertino, CA*

Formlabs Summer 2015
Mechanical Engineering Intern *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 **2018 - present**
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.

East Campus Roller Coaster 2015
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.

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