Lillian Chin

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Education

Massachusetts Institute of Technology (MIT) — **2017 – 2022 (expected)**
PhD in Electrical Engineering and Computer Science — *Cambridge, MA*
Thesis Advisor: Daniela Rus

Massachusetts Institute of Technology (MIT) — **June 2017**
B.S. in Electrical Engineering and Computer Science — *Cambridge, MA*
Minors in Mechanical Engineering, Comparative Media Studies — *GPA: 4.9/5.0*

Honors

Hertz Foundation Graduate Fellowship — **2018 – 2022**
National Science Foundation Graduate Research Fellowship — **2018 – 2021**
Paul and Daisy Soros Fellowship for New Americans — **2018 – 2020**
MIT Energy Initiative Graduate Fellowship — **2018**
Phi Beta Kappa Honors Society, Xi Chapter — **2017**

Publications

Peer-Reviewed Journal Articles

[J.3] Lipton, J., MacCurdy, R., Manchester, Z., **Chin, L.**, Celluci, D., & Rus, D. "Handedness in Shearing Auxetics Creates Rigid and Compliant Structures." *Science*. 360(6389): 632-635. (2018)

[J.2] Stevens, A., Oliver, R., Kirchmeyer, M., Wu, J., **Chin, L.**, Polsen E., Archer, C., Boyle, C., Garber, J., and Hart, J. "Conformal robotic stereolithography." *3D Printing and Additive Manufacturing*, 3(4): 226-235. (2016)

[J.1] Harrow, C. and **Chin, L.** "Technology-Enhanced Discovery." *Mathematics Teacher*, **107**: 660 – 665. (2014)

Peer-Reviewed Conference Papers

[C.5] Lipton, J., **Chin, L.**, Miske, J., & Rus, D. "Modular Volumetric Actuators Using Motorized Auxetics". In *Intelligent Robots and Systems (IROS), 2019 IEEE International Conference on.* IEEE. (2019). Manuscript Under Review.

[C.4] **Chin, L.**, Lipton, J., Yuen, M.C., Kramer-Bottiglio, R., & Rus, D. "A Simple Electric Soft Robotic Gripper with High-Deformation Haptic Feedback." In *Robotics and Automation (ICRA), 2019 IEEE International Conference on.* IEEE. (2019).

[C.3] **Chin, L.**, Lipton, J., Yuen, M.C., Kramer-Bottiglio, R., & Rus, D. "Automated Recycling Separation Enabled by Soft Robotic Material Classification." In *Soft Robotics (Robosoft), 2019 IEEE International Conference on.* IEEE. (2019).

[C.2] **Chin, L.**, Lipton, J., MacCurdy, R., Romanishin, J., Sharma, C., & Rus, D. "Compliant Electric Acutators Based on Handed Shearing Auxetics." In *Soft Robotics (Robosoft), 2018 IEEE International Conference on.* IEEE. (2018).

[C.1] Beaudoin J., **Chin L.**, Zlotnick H., Cervantes T., Lassey S., Robinson J., Slocum A. "Obstetrical Forceps with Passive Rotation and Sensor Feedback". ASME. Frontiers in Biomedical Devices, *2018 Design of Medical Devices Conference*. (2018).

Patents

[P.1] Lipton, J., MacCurdy, R., **Chin, L.**, & Rus, D. "Non-planar shearing auxetic structures, devices, and methods", Application #: US 15/965,711

Research and Work Experience

MIT Computer Science & Artifical Intelligence Lab., Distributed Robotics Group — **2017 – present**
Graduate Researcher with Dr. Daniela Rus

Toyota Research Institute — **Summer 2017**
Robotics Research Intern with Dr. Russ Tedrake

MIT Computer Science & Artifical Intelligence Lab., Distributed Robotics Group — **2016 – 2017**

Undergraduate Researcher with Dr. Daniela Rus

MIT Dept. of Mechanical Engineering, Mechanosynthesis Group **2014 – 2017**
Undergraduate Researcher with Dr. John Hart

Apple **Summer 2016**
iPad Hardware Systems Integration, Electrical Engineering Intern

Square **Summer 2015**
Electrical Engineering Intern

MIT Media Lab, Biomechatronics Group **2015**
Undergraduate Researcher with Dr. Hugh Herr

Coursera **Summer 2014**
Software Engineering Intern

Georgia Institute of Technology, Department of Mechanical Engineering **2011 – 2013**
Research Intern with Dr. Michael Leamy

Emory University, Department of Pharmacology **2011 – 2013**
Research Intern with Dr. Jennifer Hurst-Kennedy

Westminster Schools **2010 – 2013**
Research Intern with Dr. Chris Harrow and Dr. Shaffiq Welji

Teaching Experience

Academic

Teaching Assistant, MIT 6.146 – Mobile Autonomous Systems Laboratory **2018**
Head Lab Assistant, MIT 6.002 – Circuits and Electronics **2015 – 2017**
Lab Assistant, MIT 6.004 – Computation Structures **Fall 2016**

Extracurricular

Mentor, Society of Women Engineers Alumni Mentorship Program **2018 – present**
Mentor, MIT Office of Minority Education, Laureates and Leaders Program **2018 – present**
Mentor, MIT Women in Electrical Engineering and Computer Science **2018 – present**
Mentor and Library Machine Master, MIT MakerWorkshop **2017 – present**
Teacher, MIT Educational Studies Program **2013 – present**
Tutor, InstaEDU / Chegg Tutors **2014 – 2017**
Mentor, Girls Who Code **2015**
Mentor, Society of Women Engineers **2014**

Professional Service

Conference Service

Local Arrangements Chair, ACM Symposium on Computational Fabrication **2018**

External Paper Reviewer

IEEE International Conference on Soft Robotics (Robosoft) **2018 – 2019**
International Journal of Robotics Research (IJRR) **2019**
IEEE International Conference on Intelligent Robots and Systems (IROS) **2019**

Professional Societies: IEEE, SWE

Research Students Supervised

Undergraduate Students

Hannah Adams **2019 – present**
Shiloh Curtis **2018 – present**
Joseph Jerkins **2018 – present**
Jacob Miske [C.5] **2018 – present**
Jonathan Tagoe **2018 – present**

Chetan Sharma [C.2] **2017 – 2019**
Luis Trueba [C.4] **2018**
Aidan Fay **2018**
Nathaniel Huffman **2018**
John Whitehead **2018**
Dani Gonzalez **2018**
Antares McCoy-Villaneda **2018**

Leadership Experience

Treasurer, MIT Sporting Clays Association **2018 – present**
President and Founder, Free Fossils MIT **2014 – present**
Chair, MIT Undergrad. Association: Student-Administration Collaboration Committee **2015 – 2017**
Member, MIT Medlinks **2013 – 2017**
Captain, Lead Coder, and Founder, Westminster Robotics Teams **2010 – 2013**

Side Projects

2.72 – Elements of Machine Design **2016**

Desktop lathe that maintained 50 micron precision even after being dropped. Won first place for highest accuracy

MIT Mobile Autonomous Systems Laboratory **2016**

Cube-stacking autonomous robot. Won first place, best software, best wiki and "most likely to be staff" award

MakeMIT **2014**

Guitar-playing robot that uses solenoids to strum and a rack-and-pinion setup to fret. Won first place.