

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.**, Yuen, M.C., Lipton, J., Trueba, L.H., 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). **Winner, Best Poster Award**
- [C.2] **Chin, L.**, Lipton, J., MacCurdy, R., Romanishin, J., Sharma, C., & Rus, D. "Compliant Electric Actuators 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 & Artificial 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 & Artificial Intelligence Lab., Distributed Robotics Group <i>Undergraduate Researcher with Dr. Daniela Rus</i>	2016 – 2017
MIT Dept. of Mechanical Engineering, Mechanosynthesis Group <i>Undergraduate Researcher with Dr. John Hart</i>	2014 – 2017
Apple <i>iPad Hardware Systems Integration, Electrical Engineering Intern</i>	Summer 2016
Square <i>Electrical Engineering Intern</i>	Summer 2015
MIT Media Lab, Biomechatronics Group <i>Undergraduate Researcher with Dr. Hugh Herr</i>	2015
Coursera <i>Software Engineering Intern</i>	Summer 2014
Georgia Institute of Technology, Department of Mechanical Engineering <i>Research Intern with Dr. Michael Leamy</i>	2011 – 2013
Emory University, Department of Pharmacology <i>Research Intern with Dr. Jennifer Hurst-Kennedy</i>	2011 – 2013
Westminster Schools <i>Research Intern with Dr. Chris Harrow and Dr. Shaffiq Welji</i>	2010 – 2013

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
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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
Sabina Tontici	2019 – present
Gregory Xie	2019 – present
Shiloh Curtis	2018 – present

Joseph Jerkins	2018 – present
Jacob Miske [C.5]	2018 – present
Chetan Sharma [C.2]	2017 – 2019
Jonathan Tagoe	2018 – 2019
Luis Trueba [C.4]	2018
Aidan Fay	2018
Nathaniel Huffman	2018
John Whitehead	2018
Dani Gonzalez	2018
Antares McCoy-Villaneda	2018

LEADERSHP 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.	