

# LILLIAN CHIN

<http://lillych.in> · (404)-561-9619 · [ltchin@mit.edu](mailto:ltchin@mit.edu)

## EDUCATION

---

**Massachusetts Institute of Technology (MIT)** **2017 - present**  
*PhD in Electrical Engineering and Computer Science* *Cambridge, MA*  
*Advisor: Daniela Rus* *GPA: 4.8/5.0*

**Massachusetts Institute of Technology (MIT)** **2017 - 2019**  
*S.M. in Electrical Engineering and Computer Science* *Cambridge, MA*  
*Thesis: "A High-Deformation Electric Soft Robotic Gripper via Handed Shearing Auxetics"* *GPA: 4.8/5.0*

**Massachusetts Institute of Technology (MIT)** **2013 - 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**  
**Jeopardy College Championship Winner** **2017**  
**Phi Beta Kappa Honors Society, Xi Chapter** **2017**

## PUBLICATIONS

---

### Peer-Reviewed Journal Articles

- [J.4] **Chin, L.** "How to Survive a Public Faming: Understanding 'The Spiciest Memelord' via the Temporal Dynamics of Involuntary Celebrification". *First Monday*. Manuscript Under Review.
- [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.6] **Chin, L.**, Barscevicius, F., Lipton, J., & Rus, D. "Multiplexed Manipulation: Versatile Multimodal Grasping via a Hybrid Soft Gripper." In *Robotics and Automation (ICRA), 2020 IEEE International Conference on*. IEEE. (2020).
- [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).
- [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

## Workshop and Symposium Contributions

- [W.3] **Chin, L.** “Focusing the Legal Lens on Data: Examining Metaphors of Personal Data and their Legal Implications ” Paper and poster in [2019 ACM Inaugural Symposium on Computer Science and Law](#)  
**First Prize, Student Paper Competition**
- [W.2] **Chin, L.** “Design and fabrication of dual-flipping mechanisms.” Abstract and poster in 2019 International Conference on Robotics and Automation workshop: *Robot Design and Customization: Opportunities at the Intersection of Computation and Digital Fabrication*
- [W.1] **Chin, L.**, Lipton, J., MacCurdy, R., Romanishin, J., Sharma, C., & Rus, D. “Compliant Electric Actuators Based on Handed Shearing Auxetics.” Poster in [2018 New England Manipulation Symposium](#)

## 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, MIT EECS Graduate Application Assistance Program	2020 – present
Tutor, ESL Program for MIT Facilities Department Employees	2019 – present
Teacher, MIT Educational Studies Program	2013 – present
Mentor, Cientifico Latino Graduate Student Mentorship Initiative	2018 – 2020
Mentor, Society of Women Engineers Alumni Mentorship Program	2018 – 2020
Mentor, MIT Office of Minority Education, Laureates and Leaders Program	2018 – 2020
Mentor, MIT Women in Electrical Engineering and Computer Science	2018 – 2020
Mentor and Library Machine Master, MIT MakerWorkshop	2017 – 2020
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

International Journal of Robotics Research (IJRR)	2019
IEEE International Conference on Intelligent Robots and Systems (IROS)	2019
IEEE Robotics and Automation Letters (RA-L)	2019
First Monday	2020
IEEE International Conference on Soft Robotics (Robosoft)	2018 – 2020
IEEE International Conference on Robotics and Automation (ICRA)	2019 – 2020

### Invited Speaker

University of Copenhagen SURF@DAWN – Speaker, “Embodied Intelligence”	July 2020
Consumer Electronics Expo – Panelist, “Robots Save the Land”	Jan. 2020
Designed Education – Speaker, “Introduction to Robotics”	July 2018
Georgia FIRST Robotics: Peachtree Regional – Guest Speaker	Mar. 2017

**Professional Societies:** IEEE, SWE

## RESEARCH STUDENTS SUPERVISED

---

### Undergraduate Students

Valerie Chen	2019 – present
Gregory Xie	2019 – present
Sofia Leon	2019 – 2020
Hannah Adams	2019

Felipe Barscevicius [C.6]	2019
Andromeda Teevens	2019
Sabina Tontici	2019
Chetan Sharma [C.2]	2017 – 2019
Shiloh Curtis	2018 – 2019
Joseph Jerkins	2018 – 2019
Jacob Miske [C.5]	2018 – 2019
Jonathan Tagoe	2018 – 2019
Aidan Fay	2018
Dani Gonzalez	2018
Antares McCoy-Villaneda	2018
Nathaniel Huffman	2018
Luis Trueba [C.4]	2018
John Whitehead	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

#### OTHER EMPLOYMENT

---

<b>Toyota Research Institute</b>	Summer 2017
<i>Robotics Research Intern with Dr. Russ Tedrake</i>	
<b>MIT Computer Science &amp; Artificial Intelligence Lab., Distributed Robotics Group</b>	2016 – 2017
<i>Undergraduate Researcher with Dr. Daniela Rus</i>	
<b>MIT Dept. of Mechanical Engineering, Mechanosynthesis Group</b>	2014 – 2017
<i>Undergraduate Researcher with Dr. John Hart</i>	
<b>Apple</b>	Summer 2016
<i>iPad Hardware Systems Integration, Electrical Engineering Intern</i>	
<b>Square</b>	Summer 2015
<i>Electrical Engineering Intern</i>	
<b>MIT Media Lab, Biomechatronics Group</b>	2015
<i>Undergraduate Researcher with Dr. Hugh Herr</i>	
<b>Coursera</b>	Summer 2014
<i>Software Engineering Intern</i>	
<b>Georgia Institute of Technology, Department of Mechanical Engineering</b>	2011 – 2013
<i>Research Intern with Dr. Michael Leamy</i>	
<b>Emory University, Department of Pharmacology</b>	2011 – 2013
<i>Research Intern with Dr. Jennifer Hurst-Kennedy</i>	
<b>Westminster Schools</b>	2010 – 2013
<i>Research Intern with Dr. Chris Harrow and Dr. Shaffiq Welji</i>	

#### SIDE PROJECTS

---

<b>2.72 – Elements of Machine Design</b>	2016
Desktop lathe that maintained 50 micron precision even after being dropped. Won first place for highest accuracy	
<b>MIT Mobile Autonomous Systems Laboratory</b>	2016
Cube-stacking autonomous robot. Won first place, best software, best wiki and “most likely to be staff” award	

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