

# MICHELLE A. LEE

Email: [michellelee@cs.stanford.edu](mailto:michellelee@cs.stanford.edu)

## EDUCATION

<b>Ph.D. Candidate</b> at Stanford University	Jan 2018- Present
Mechanical Engineering	
<b>Masters of Science</b> at Stanford University	2015-2018
Mechanical Engineering	
<b>Bachelors of Science</b> at Stanford University	2010-2015
Chemical Engineering	

## HONORS AND AWARDS

- NeurIPS Robot Learning Workshop Best Paper Award, 2019
- IEEE International Conference of Robotics and Automation (ICRA) Best Conference Paper Award, 2019
- IEEE International Conference of Robotics and Automation (ICRA) Best Paper Award in Cognitive Robotics Finalist, 2019
- Accel Innovation Scholar, 2019
- Mayfield Fellow Program, 2015
- Stanford Build Tech Grant, \$3000 awarded to selected robotics projects, 2013
- Tau Beta Pi, top 12% (junior year) of Stanford engineering class based on GPA, 2015

## PUBLICATIONS

**Lee, M.A.\***, Yi, B.\*, Martín-Martín, R., Savarese, S., and Bohg, J. Multimodal Sensor Fusion with Differentiable Filters. In 2020 International Conference on Intelligent Robots and Systems (IROS).

**Lee, M.A.\***, Florensa, C\*, Tremblay, J, ... Fox, D. (2019). Guided Uncertainty-Aware Policy Optimization. In 2020 Conference on Robotics and Automation (ICRA).

**Lee, M. A.**, Zhu, Y., Zachares, P., Tan, M., Srinivasan, K., Savarese, S., Fei-Fei, L., ... & Bohg, J. (2020). Making sense of vision and touch: Learning multimodal representations for contact-rich tasks. In IEEE Transactions on Robotics.

Martín-Martín, R., **Lee, M. A.**, Gardner, R., Savarese, S., Bohg, J., & Garg, A. (2019). Variable Impedance Control in End-Effector Space: An Action Space for Reinforcement Learning in Contact-Rich Tasks. In 2019 International Conference on Intelligent Robots and Systems (IROS).

**Lee, M. A.\***, Zhu, Y\*, Srinivasan, K., Shah, P., Savarese, S., Fei-Fei, L., ... & Bohg, J. (2019). Making sense of vision and touch: Self-supervised learning of multimodal representations for contact-rich tasks. In 2019 International Conference on Robotics and Automation (ICRA). **ICRA Best Paper Award, Finalist for Best Paper Award in Cognitive Robotics.**

## REVIEWED WORKSHOP PAPERS

Lee, M.A.\*, Florensa, C\*, Tremblay, J, ... Fox, D. (2019). Guided Uncertainty-Aware Policy Optimization. In 2019 NeurIPs Workshop on Robot Learning: Control and Interaction in the Real World. **Best Paper Award.**

Martín-Martín, R., Lee, M. A., Gardner, R., Savarese, S., Bohg, J., & Garg, A. Variable Impedance Control in End-Effector Space: An Action Space for Reinforcement Learning in Contact-Rich Tasks. In 2019 RSS Women in Robotics Workshop.

Lee, M. A., Zhu, Y.,... & Bohg, J. (2019). Variational multimodal representations for contact-rich tasks. In 2019 RSS Workshop on Scalable Learning for Integrated Perception and Planning Workshop.

Lee, M. A.\*, Zhu, Y.\*,... & Bohg, J. Learning Multi-Modal Representations for Contact-Rich Manipulation Tasks. In 2018 RSS Women in Robotics Workshop.

## PAPERS UNDER REVIEW

Lee, M. A., Tan, M., Zhu, Y., & Bohg, J. Detect, Reject, Correct: Crossmodal Compensation of Corrupted Sensors. Under Review in ICRA 2021.

Zachares P., Lee, M. A., Liao, W., & Bohg, J. Interpreting Contact Interactions to Overcome Failure in Robot Assembly Tasks. Under Review in ICRA 2021.

## WORK EXPERIENCE

**Stanford AI Lab** (Stanford, CA)

Aug '17-Present

Research Assistant

- Advised by Jeannette Bohg at the Interactive Perception Action Lab (IPRL)
- Member of the People, Robots, and AI group led by Fei-Fei Li and Silvio Savarase
- Robot learning, perception, multimodal sensor fusion, deep learning, and controls

**NVIDIA AI** (Seattle, WA)

June '19 - Sept '19

Research Intern

- Advised by Dieter Fox and Fabio Ramos
- Reasoning under uncertainty by combining expert and learned policies, reinforcement learning

**LCY** (Huizhou, China & Taipei, Taiwan)

June '16- April '17

Special Projects Engineer

- 6-member special projects team to oversee and design a new automated production line at factory

**SpaceX** (Hawthorne, CA)

Sept '15- Dec '15

Vehicle Engineering Intern

- Designed flight parts for second stage rocket from design to manufacturing to stress testing

**Sano** (San Francisco, CA)

June '14-Sept '14

Engineering Intern

- Developed the first enclosure prototypes for a next-gen metabolite-sensing wearables products

## LEADERSHIP EXPERIENCE

**Stanford AI Lab (SAIL) Blog**

Sept 18- Current

*Founding co-editor-in-chief*

- Launched blog for the Stanford AI Lab that features SAIL research, written for general audiences
- Edited blog, solicited writing from lab members, created editorial guideline

**Stanford AI Lab Robotics Lunch**

Jan 19- Sept 19

Co-organizer

- Bi-weekly luncheon for researchers to present original research on robotics

**Stanford AI Salon**

Sept 18-Sept 19

Co-organizer

- Organized bi-weekly salon event on big picture questions in AI
- Moderated a public AI Salon event on the Future of Work with over 500+ participants

**Tau Beta Pi**

Sept '14- June '15

Professional Development Co-Chair

- Organized dinners for Tau Beta Pi members with Silicon Valley founders and VC's

## TEACHING EXPERIENCE

**TA**, CS 336: Robot Perception and Decision-Making

Fall '19

**Instructor**, AI4ALL, taught 9th grade girls machine learning and statistics

Summer '18

**TA**, CS 326: Topics in Advanced Robotic Manipulation (graduate-level course)

Fall '17

**TA**, Industrial Revolution Camp (entrepreneurship camp for low income students)

Summer '16

## ADVISING & MENTORSHIP EXPERIENCE

Stanford AI Lab Grad/Undergrad Mentorship Program Mentor	April '18- Current
Ria Doshi (High school student '22)	Aug '18-Current
Peter Zachares (Stanford ME Masters '19)	Sept '18- Current
Matthew Tan (Stanford CS Undergraduate '20)	Oct '18- June'20
Rachel Gardner (Stanford CS Undergraduate '20)	Oct '18- Current
Kevin Zakka (Stanford CS Masters Student '21)	Oct '19-Feb'20
Brent Yi (Stanford CS Masters Student '21)	Oct '19-Current

## REVIEWING ACTIVITIES

**Journals:** IEEE Robotics and Automation Letters (RA-L) 2020, IEEE Robotics and Automation Letters (RA-L) 2019

**Conferences and Workshops:** Conference on Robot Learning (CoRL) 2020, RSS Action Space Workshop 2020, International Conference on Intelligent Robots and Systems (IROS) 2020, Robotics: Science and Systems (RSS) 2020, IEEE International Conference on Robotics and Automation (ICRA) 2020 Robotics: Science and Systems (RSS) 2019, IEEE International Conference on Robotics and Automation (ICRA) 2019

**Magazines:** IEEE Robotics & Automation Magazine 2020,