

# Chelsea Finn

Stanford Computer Science Department  
353 Jane Stanford Way  
Stanford, CA 94305  
cbfinn@cs.stanford.edu  
<http://ai.stanford.edu/~cbfinn>

## Current Positions

**Stanford University**, Computer Science Department, Assistant Professor 2019 – present  
**Google, Inc.**, Brain Team, Research Scientist 2018 – present

## Education

**University of California, Berkeley**, PhD 2014 – 2018  
Thesis: *"Learning to Learn with Gradients"*.  
Advisors: Pieter Abbeel, Sergey Levine  
Department of Electrical Engineering and Computer Science

**Massachusetts Institute of Technology**, Bachelor of Science 2010 – 2014  
Electrical Engineering and Computer Science

## Honors and Awards

**Microsoft Faculty Fellowship Award** 2020  
Awarded to five early-career professors in North America

**ACM Doctoral Dissertation Award** 2019  
Awarded to the best doctoral dissertation in computer science and engineering, worldwide

**MIT TR35 Innovator Award** 2018  
Awarded to 35 innovators under 35 worldwide

**Rising Stars in EECS** 2017  
Awarded to 70 EECS graduate and postdoctoral women

**C.V. Ramamoorthy Distinguished Research Award** 2017  
For outstanding contributions to a new research area in computer science and engineering

**ICRA Best Cognitive Robotics Paper Finalist** 2017  
For the paper *"Deep Visual Foresight for Planning Robot Motion"*

**Tong Leong Lim Pre-Doctoral Prize** 2016  
For achieving the highest distinction in the pre-doctoral examination

**Computing Community Consortium (CCC) Blue Sky Ideas Award** 2015  
For the paper *"End-to-End Training of Deep Visuomotor Policies"*

**National Science Foundation Graduate Research Fellowship** 2015-2018

**National Defense Science and Engineering Graduate Fellowship (declined)** 2015

**IEEE-HKN Alton B. Zerby and Carl T. Koerner Outstanding Student Award** 2015  
Awarded annually to one undergraduate student in the United States

**SanDisk Fellowship** 2015

**UC Berkeley EECS Department Fellowship** 2014

**MIT SuperUROP Outstanding Research Presentation Award** 2014  
*"Real-time Text Detection in Human Scenes"*

## Teaching

### Instructor

*Stanford CS221: Artificial Intelligence: Principles and Techniques* Spring 2020

*Stanford CS330: Deep Multi-Task and Meta Learning* Fall 2019

*Berkeley CS294-112: Deep Reinforcement Learning* Spring 2017

### Teaching Assistant

*Berkeley CS188 Introduction to Artificial Intelligence* Spring 2015

*MIT 6.008 Introduction to Inference* Spring 2014

*MIT 6.141 Robotics: Science and Systems I* Spring 2014

*MIT 6.02 Digital Communication Systems* Spring 2014

### Invited Guest Lectures & Tutorials

*Rethinking Reinforcement Learning from the Perspective of Generalization* Fall 2019  
in CS285: Deep Reinforcement Learning, Berkeley.

*Tutorial on Meta-Learning: from Few-Shot Learning to Rapid Reinforcement Learning* Summer 2019  
at the International Conference on Machine Learning (ICML).  
at the Conference on Computer Vision and Pattern Recognition (CVPR).

*Tutorial on Deep Visuomotor Learning* Summer 2019  
in Computational Vision Summer School, Freudenstadt.

*Meta Reinforcement Learning* Winter 2019  
in CS234: Reinforcement Learning, Stanford.

*Meta Reinforcement Learning* Fall 2018  
in CS332: Advanced Topics in Reinforcement Learning, Stanford.  
in CS294: Deep Reinforcement Learning, UC Berkeley.

*Tutorial on Deep Visuomotor Learning* Summer 2018  
in International Computer Vision Summer School, Sicily.

*Learning to Learn* Spring 2018  
in CS294-129: Designing, Visualizing and Understanding Deep Neural Networks  
Berkeley.

*Advanced Model-based Reinforcement Learning* Fall 2017  
in CS294-112: Deep Reinforcement Learning, Berkeley.

*Model-based Reinforcement Learning* Fall 2017  
in Deep Reinforcement Learning Bootcamp, Berkeley.

*Inverse Reinforcement Learning* Fall 2017  
in Deep Reinforcement Learning Bootcamp, Berkeley.

*Tutorial on Deep Reinforcement Learning, Decision Making, and Control* at the International Conference on Machine Learning (ICML). Summer 2017

*Deep Visuomotor Learning* in CS280: Computer Vision, Berkeley. Spring 2017

*Soft Optimality and Inverse Reinforcement Learning* in CS234: Reinforcement Learning, Stanford. Spring 2017

*Deep Visuomotor Learning* in CS280: Computer Vision, Berkeley. Spring 2016

*Guided Policy Search Methods* in CS294: Deep Reinforcement Learning, Berkeley. Fall 2015

## Selected Invited Talks

**Data Scalability in Robot Learning.**  
*RSS Self-Supervised Learning Workshop.* July 2020.

**Beyond the Training Distribution: Embodiment, Adaptation, and Symmetry.**  
*MIT Embodied Intelligence Seminar.* June 2020.

**Extrapolation via Adaptation.**  
*L4DC Conference Keynote.* June 2020.

**Meta-Learning Beyond Few-Shot Classification.**  
*CVPR Workshop on Deep Declarative Networks.* June 2020.

**Meta-Learning Symmetries and Distributions.**  
*CVPR Workshop on Compositionality.* June 2020.

**Peculiar Optimization and Regularization Challenges in Multi-Task Learning and Meta-Learning.**  
*Workshop on New Directions in Optimization, Statistics and Machine Learning, The Institute for Advanced Study.* April 2020  
*CVPR Workshop on Efficient Deep Learning.* June 2020.

**Meta-Learning and Memorization.**  
*CIFAR Learning in Machines and Brains Program Meeting.* December 2019  
*NeurIPS Workshop on Bayesian Deep Learning.* December 2019

**The Next Generation of Robot Learning.**  
*Stanford Robotics Seminar.* December 2019.

**Flexible Neural Networks and the Frontiers of Meta-Learning.**  
*Simons Institute Workshop on Emerging Challenges in Deep Learning.* August 2019.

**Reinforcement Learning for Robots.**  
*The Multi-Disciplinary Conference on Reinforcement Learning and Decision Making (RLDM).* July 2019.

**Learning to Adapt to Dynamic, Real-World Environments.**  
*RSS Workshop on Simulation to Real-World Transfer.* June 2019.

**Learning Compound Tasks through Interaction and Observation.**  
*RSS Workshop on Task-Informed Grapng.* June 2019.

**Learning Models of the World and its Intentions.**

*CVPR Workshop on Vision Meets Cognition.* June 2019.

**A Practical View on Generalization and Autonomy in the Real World.**

*ICML Workshop on Understanding and Improving Generalization in Deep Learning.* June 2019.

*ICML Workshop on AI for Autonomous Driving.* June 2019.

**Complexity without Losing Generality: The Role of Supervision and Composition.**

*ICML Workshop on Generative Modeling and Model-Based Reasoning for Robotics and AI.* June 2019.

**Agents that Set Measurable Goals for Themselves.**

*ICML Workshop on Self-Supervised Learning.* June 2019.

**Meta-Learning: Challenges and Frontiers.**

*ICLR Workshop on Learning from Limited Data.* May 2019.

*CIFAR Learning in Machines and Brains Program Meeting.* May 2019.

*ICML Workshop on Multi-Task and Adaptive Learning.* June 2019.

**What can we learn from unlabeled interaction?**

*ICLR Workshop on Task-Agnostic Reinforcement Learning.* May 2019

**Versatility and Self-Supervision in Deep Robotic Learning.**

*University of Pennsylvania, GRASP Lab.* May 2019

**Meta-Learning Deep Networks.** *Re-work Deep Learning Summit, San Francisco.* January 2019.

**Meta-Learning across Time.** *NeurIPS Workshop on Continual Learning.* December 2018.

**An agent that can do many things (by modeling the world).** *NeurIPS Workshop on Modeling the Physical World.* December 2018.

**Learning Generalizable Models through Unsupervised Interaction.** *NeurIPS Workshop on Modeling and Decision-Making in the Spatiotemporal Domain.* December 2018.

**Model-Based Deep Reinforcement Learning Tutorial.** *CIFAR Learning in Machines and Brains Program Meeting.* December 2018

**Building Versatile Agents through Unsupervised Interaction.**

*Stanford Minds, Brains, and Computation (MBC) Colloquium.* November 2018.

*Stanford DAWN Seminar.* November 2018

**Robots that Excel in Diverse Environments.** *Bay Area Robotics Symposium.* November 2018

**Building Unsupervised, Versatile Agents with Meta Learning.**

*University of Washington Robotics Colloquium.* October 2018.

*Allen Institute for Artificial Intelligence.* October 2018.

*OpenAI.* November 2018.

**Meta-Learning Frontiers: Universal, Uncertain, and Unsupervised.** *Google DeepMind.* July 2018.

**Properties of Good Meta-Learning Algorithms (And How to Achieve Them).** *ICML AutoML Workshop.* July 2018.

**Meta-Learning for Goal Inference, Imitation, and Planning.** *RSS Workshop on Learning from Demonstrations for High-Level Tasks.* June 2018.

**Efficiency through Learning to Learn.** *Clarifai*. April 2018.

**Generalization and Self-Supervision in Deep Robotic Learning.**

*Toyota Technical Institute in Chicago (TTIC)*. February 2018.

*Stanford University*. March 2018.

*MIT*. March 2018.

*Google*. April 2018.

**Learning Versatile Behavior and Reusable Models through Real-World Interaction.** *Caltech Young Investigator Lecture*. February 2018.

**Model-Agnostic Meta-Learning: Universality, Inductive Bias, and Weak Supervision.** *NIPS Workshop on Meta-Learning*. December 2017.

**Deep Predictive Learning for Acquiring Vision-Based Skills.** *ICML Workshop on Reinforcement Learning*. August 2017.

**Learning Representations for Versatile Behavior.** *RSS Workshop on New Frontiers for Deep Learning in Robotics*. July 2017.

**Learning through Interaction: Generalization in Robot Reinforcement Learning.**

*Symposium on Robot Learning, Berkeley, CA*. May 2017.

*MIT*. April 2017.

*Stanford University*. March 2017.

**End-to-End Deep Robotic Learning.** *Re-work Deep Learning Summit, San Francisco*. January 2017.

**Guided Cost Learning and Connections to Generative Adversarial Modeling.** *NIPS Deep Learning Symposium*. December 2016.

**Large Scale Self-Supervised Robotic Learning.**

*NIPS Deep Reinforcement Learning Workshop*. December 2016.

*NIPS Neurorobotics Workshop*. December 2016.

**Robotic Visuomotor Learning.** *3DV Tutorial: Workshop on Understanding 3D and Visuomotor Learning*. October 2016.

**Learning Visuomotor Skills.**

*OpenAI*. March 2016.

*Google DeepMind*. May 2016.

**Robotic Visuomotor Learning.** *Redwood Center for Theoretical Neuroscience*. November 2015.

**End-to-End Training of Deep Visuomotor Policies.** *Google, Inc.*. March 2015.

## Journal and Conference Publications

[56] Karl Schmeckpeper, Annie Xie, Oleh Rybkin, Stephen Tian, Kostas Daniilidis, Sergey Levine, **Chelsea Finn**. Learning Predictive Models from Observation and Interaction. *European Conference on Computer Vision (ECCV)*. 2020.

[55] Suraj Nair, Silvio Savarese, **Chelsea Finn**. Goal-Aware Prediction: Learning to Model What Matters. *International Conference on Machine Learning (ICML)*. 2020.

[54] Jesse Zhang, Brian Cheung, **Chelsea Finn**, Sergey Levine, Dinesh Jayaraman. Cautious Adaptation

For Reinforcement Learning in Safety-Critical Settings. *International Conference on Machine Learning (ICML)*. 2020.

[53] Mingzhang Yin, George Tucker, Mingyuan Zhou, Sergey Levine, **Chelsea Finn**. Meta-Learning without Memorization. *International Conference on Learning Representations (ICLR)*. 2020.

[52] Suraj Nair, **Chelsea Finn**. Hierarchical Foresight: Self-Supervised Learning of Long-Horizon Tasks via Visual Subgoal Generation. *International Conference on Learning Representations (ICLR)*. 2020.

[51] Allan Zhou, Eric Jang, Daniel Kappler, Alex Herzog, Mohi Khansari, Paul Wohlhart, Yunfei Bai, Mrinal Kalakrishnan, Sergey Levine, **Chelsea Finn**. Watch, Try, Learn: Meta-Learning from Demonstrations and Rewards. *International Conference on Learning Representations (ICLR)*. 2020.

[50] Manoj Kumar, Mohammad Babaeizadeh, Dumitru Erhan, **Chelsea Finn**, Sergey Levine, Laurent Dinh, Durk Kingma. VideoFlow: A Conditional Flow-Based Model for Stochastic Video Generation. *International Conference on Learning Representations (ICLR)*. 2020.

[49] Łukasz Kaiser, Mohammad Babaeizadeh, Piotr Miłoś, Błażej Osipiński, Roy H Campbell, Konrad Czechowski, Dumitru Erhan, **Chelsea Finn**, Piotr Kozakowski, Sergey Levine, Afroz Mohiuddin, Ryan Sepassi, George Tucker, Henryk Michalewski. Model-Based Reinforcement Learning for Atari. *International Conference on Learning Representations (ICLR)*. 2020.

[48] Mark Woodward, **Chelsea Finn**, Karol Hausman. Learning to Interactively Learn and Assist. *AAAI Conference on Artificial Intelligence (AAAI)*. 2020.

[47] Sudeep Dasari, Frederik Ebert, Stephen Tian, Suraj Nair, Bernadette Bucher, Karl Schmeckpeper, Siddharth Singh, Sergey Levine, **Chelsea Finn**. RoboNet: Large-Scale Multi-Robot Learning. *Conference on Robot Learning (CoRL)*. 2019.

[46] Tianhe Yu\*, Deirdre Quillen\*, Zhanpeng He, Ryan Julian, Karol Hausman, **Chelsea Finn**, Sergey Levine. Meta-World: A Benchmark and Evaluation for Multi-Task and Meta Reinforcement Learning. *Conference on Robot Learning (CoRL)*. 2019.

[45] John Co-Reyes, Rishi Veerapaneni, Michael Chang, Michael Janner, **Chelsea Finn**, Jiajun Wu, Josh Tenenbaum, Sergey Levine. Entity Abstraction in Visual Model-Based Reinforcement Learning. *Conference on Robot Learning (CoRL)*. 2019.

[44] Allan Jabri, Kyle Hsu, Ben Eysenbach, Abhishek Gupta, Sergey Levine, **Chelsea Finn**. Unsupervised Curricula for Visual Meta-Reinforcement Learning. *Neural Information Processing Systems (NeurIPS)*. 2019.

[43] Russell Mendonca, Abhishek Gupta, Rosen Kravev, Pieter Abbeel, Sergey Levine, **Chelsea Finn**. Guided Meta Policy Search. *Neural Information Processing Systems (NeurIPS)*. 2019.

[42] Yiding Jiang, Shixiang Gu, Kevin Murphy, **Chelsea Finn**. Language as an Abstraction for Hierarchical Reinforcement Learning. *Neural Information Processing Systems (NeurIPS)*. 2019.

[41] Aravind Rajeswaran\*, **Chelsea Finn**\*, Sham Kakade, Sergey Levine. Meta-Learning with Implicit Gradients. *Neural Information Processing Systems (NeurIPS)*. 2019.

[40] Lantao Yu, Tianhe Yu, **Chelsea Finn**, Stefano Ermon. Meta-Inverse Reinforcement Learning with Probabilistic Context Variables. *Neural Information Processing Systems (NeurIPS)*. 2019.

[39] Tianhe Yu, Pieter Abbeel, Sergey Levine, **Chelsea Finn**. One-Shot Hierarchical Imitation Learning of Compound Visuomotor Tasks. *International Conference on Intelligent Robots and Systems (IROS)*. 2019.

- [38] Tianhe Yu, Gleb Shevchuk, Dorsa Sadigh, **Chelsea Finn**. Unsupervised Visuomotor Control via Distributional Planning Networks. *Robotics: Science and Systems (RSS)*. 2019.
- [37] Annie Xie, Frederik Ebert, Sergey Levine, **Chelsea Finn**. Improvisation through Physical Understanding: Using Novel Objects as Tools with Visual Foresight. *Robotics: Science and Systems (RSS)*. 2019.
- [36] Avi Singh, Larry Yang, Kristian Hartikainen, **Chelsea Finn**, Sergey Levine. End-to-End Robotic Reinforcement Learning without Reward Engineering. *Robotics: Science and Systems (RSS)*. 2019.
- [35] **Chelsea Finn\***, Aravind Rajeswaran\*, Sham Kakade, Sergey Levine. Online Meta-Learning. *International Conference on Machine Learning (ICML)*. 2019.
- [34] Kate Rakelly\*, Aurick Zhou\*, Deirdre Quillen, **Chelsea Finn**, Sergey Levine. Efficient Off-Policy Meta-Reinforcement Learning via Probabilistic Context Variables. *International Conference on Machine Learning (ICML)*. 2019.
- [33] Kelvin Xu, Ellis Ratner, Anca Dragan, Sergey Levine, **Chelsea Finn**. Learning a Prior over Intent via Meta-Inverse Reinforcement Learning. *International Conference on Machine Learning (ICML)*. 2019.
- [32] Stephen Tian\*, Frederik Ebert\*, Dinesh Jayaraman, Mayur Mudigonda, **Chelsea Finn**, Roberto Calandra, Sergey Levine. Manipulation by Feel: Touch-Based Control with Deep Predictive Models. *International Conference on Robotics and Automation (ICRA)*. 2019.
- [31] Yuxiang Yang, Ken Caluwaerts, Atil Iscen, Jie Tan, **Chelsea Finn**. NoRML: No-Reward Meta Learning. *International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*. 2019.
- [30] Michael Janner, Sergey Levine, Bill Freeman, Josh Tenenbaum, **Chelsea Finn**, Jiajun Wu. Reasoning About Physical Interactions with Object-Oriented Prediction and Planning. *International Conference on Learning Representations (ICLR)*. 2019.
- [29] Anusha Nagabandi, **Chelsea Finn**, Sergey Levine. Deep Online Learning Via Meta-Learning: Continual Adaptation for Model-Based RL. *International Conference on Learning Representations (ICLR)*. 2019.
- [28] Kyle Hsu, Sergey Levine, **Chelsea Finn**. Unsupervised Learning via Meta-Learning. *International Conference on Learning Representations (ICLR)*. 2019.
- [27] Anusha Nagabandi\*, Ignasi Clavera\*, Simin Liu, Ronald S. Fearing, Pieter Abbeel, Sergey Levine, **Chelsea Finn**. Learning to Adapt in Dynamic, Real-World Environments Through Meta-Reinforcement Learning. *International Conference on Learning Representations (ICLR)*. 2019.
- [26] **Chelsea Finn\***, Kelvin Xu\*, Sergey Levine. Probabilistic Model-Agnostic Meta-Learning. *Neural Information Processing Systems (NIPS)*. 2018.
- [25] Annie Xie, Avi Singh, Sergey Levine, **Chelsea Finn**. Few-shot Goal Inference for Visuomotor Learning and Planning. *Conference on Robot Learning (CoRL)*. 2018.
- [24] Frederik Ebert, Sudeep Dasari, Alex Lee, Sergey Levine, **Chelsea Finn**. Robustness via Retrying: Closed-Loop Robotic Manipulation with Self-Supervised Learning. *Conference on Robot Learning (CoRL)*. 2018.
- [23] Aravind Srinivas, Allan Jabri, Pieter Abbeel, Sergey Levine, **Chelsea Finn**. Universal Planning Networks. *International Conference on Machine Learning (ICML)*. 2018.

- [22] Tianhe Yu\*, **Chelsea Finn**\*, Annie Xie, Sudeep Dasari, Pieter Abbeel, Sergey Levine. One-Shot Imitation from Observing Humans via Domain-Adaptive Meta-Learning. *Robotics: Science and Systems (RSS)*. 2018.
- [21] Deirdre Quillen, Eric Jang, Ofir Nachum, **Chelsea Finn**, Julian Ibarz, Sergey Levine. Deep Reinforcement Learning for Vision-Based Robotic Grasping: A Simulated Comparative Evaluation of Off-Policy Methods. *International Conference on Robotics and Automation (ICRA)*. 2018.
- [20] **Chelsea Finn**, Sergey Levine. Meta-Learning and Universality: Deep Representations and Gradient Descent can Approximate any Learning Algorithm. *International Conference on Learning Representations (ICLR)*. 2018.
- [19] Erin Grant, **Chelsea Finn**, Sergey Levine, Trevor Darrell, Tom Griffiths. Recasting Gradient-Based Meta-Learning as Hierarchical Bayes. *International Conference on Learning Representations (ICLR)*. 2018.
- [18] Mohammad Babaeizadeh, **Chelsea Finn**, Dumitru Erhan, Roy H. Campbell, Sergey Levine. Stochastic Variational Video Prediction. *International Conference on Learning Representations (ICLR)*. 2018.
- [17] **Chelsea Finn**\*, Tianhe Yu\*, Tianhao Zhang, Pieter Abbeel, Sergey Levine. One-Shot Visual Imitation Learning via Meta-Learning. *Conference on Robot Learning (CoRL)*. 2017.
- [16] Frederik Ebert, **Chelsea Finn**, Alex Lee, Sergey Levine. Self-Supervised Visual Planning with Temporal Skip-Connections. *Conference on Robot Learning (CoRL)*. 2017.
- [15] **Chelsea Finn**, Pieter Abbeel, Sergey Levine. Model-Agnostic Meta-Learning for Fast Adaptation of Deep Networks. *International Conference on Machine Learning (ICML)*. 2017.
- [14] **Chelsea Finn**, Tianhe Yu, Justin Fu, Pieter Abbeel, Sergey Levine. Generalizing Skills with Semi-Supervised Reinforcement Learning. *International Conference on Learning Representations (ICLR)*. 2017.
- [13] **Chelsea Finn**, Sergey Levine. Deep Visual Foresight for Planning Robot Motion. *International Conference on Robotics and Automation (ICRA)*. 2017.
- [12] William Montgomery\*, Anurag Ajay\*, **Chelsea Finn**, Pieter Abbeel, Sergey Levine. Reset-Free Guided Policy Search: Efficient Deep Reinforcement Learning with Stochastic Initial States. *International Conference on Robotics and Automation (ICRA)*. 2017.
- [11] **Chelsea Finn**, Ian Goodfellow, Sergey Levine. Unsupervised Learning for Physical Interaction through Video Prediction. *Neural Information Processing Systems (NIPS)*. 2016.
- [10] Eric Tzeng, Coline Devin, Judy Hoffman, **Chelsea Finn**, Pieter Abbeel, Sergey Levine, Kate Saenko and Trevor Darrell. Adapting Deep Visuomotor Representations with Weak Pairwise Constraints. *Workshop on the Algorithmic Foundations of Robotics (WAFR)*. 2016.
- [9] **Chelsea Finn**, Sergey Levine, Pieter Abbeel. Guided Cost Learning: Deep Inverse Optimal Control via Policy Optimization. *International Conference on Machine Learning (ICML)*. 2016.
- [8] **Chelsea Finn**, Xin Yu Tan, Yan Duan, Trevor Darrell, Sergey Levine, Pieter Abbeel. Deep Spatial Autoencoders for Visuomotor Learning. *International Conference on Robotics and Automation (ICRA)*. 2016.
- [7] Marvin Zhang, Zoe McCarthy, **Chelsea Finn**, Sergey Levine, Pieter Abbeel. Learning Deep Neural Network Policies with Continuous Memory States. *International Conference on Robotics and Automation*



(ICRA). 2016.

[6] Sergey Levine\*, **Chelsea Finn\***, Trevor Darrell, Pieter Abbeel. End-to-End Training of Deep Visuomotor Policies. *Journal of Machine Learning (JMLR)*. 2016.

[5] Hsueh-Cheng Wang, **Chelsea Finn**, Liam Paull, Michael Kaess, Ruth Rosenholtz, Seth Teller, John Leonard. Bridging text spotting and SLAM with junction features. *International Conference on Intelligent Robots and Systems (IROS)*. 2015.

[4] Dylan Hadfield-Menell, Alex Xavier Lee, **Chelsea Finn**, Eric Tzeng, Sandy Huang, Pieter Abbeel. Beyond Lowest-Warping Cost Action Selection in Trajectory Transfer. *International Conference on Robotics and Automation (ICRA)*. 2015.

[3] James Duyck, **Chelsea Finn**, Andy Hutcheon, Pablo Vera, Joaquin Salas, Sai Ravela. Sloop: A pattern retrieval engine for individual animal identification. *Pattern Recognition*. 2014.

[2] **Chelsea Finn**, James Duyck, Andy Hutcheon, Pablo Vera, Joaquin Salas, Sai Ravela. Relevance feedback in biometric retrieval of animal photographs. *Mexican Conference on Pattern Recognition (MCP)*. 2014.

[1] Sai Ravela, James Duyck, **Chelsea Finn**. Vision-Based Biometrics for Conservation. *Mexican Conference on Pattern Recognition (MCP)*. 2013.

## Workshop Papers and Abstracts

**Chelsea Finn\***, Paul Christiano\*, Pieter Abbeel, Sergey Levine. A Connection between Generative Adversarial Networks, Inverse Reinforcement Learning, and Energy-based Models. *NIPS Workshop on Adversarial Training*. 2016.

Mark Woodward, **Chelsea Finn**. Active One-Shot Learning. *NIPS Deep Reinforcement Learning Workshop*. 2016.

**Chelsea Finn**, Lisa Anne Hendricks, Trevor Darrell Learning Compact Convolutional Neural Networks with Nested Dropout. *International Conference on Learning Representations (ICLR) – Workshop Contribution*. 2015.

## Advising

### PhD research:

Frederik Ebert  
Tianhe Yu  
Suraj Nair  
Allan Zhou  
Annie Xie  
Evan Liu  
Eric Mitchell

### Masters research:

Frederik Ebert (currently PhD student at UC Berkeley)  
Henrik Marklund  
Rafael Rafailov

### **Undergraduate research:**

Nopphon Sirinart (MS at Stanford)  
Justin Fu (currently PhD student at UC Berkeley)  
Marvin Zhang (currently PhD student at UC Berkeley)  
Anurag Ajay (currently PhD student at MIT)  
Tianhe Yu (currently PhD student at Stanford)  
Xin Yu Tan  
Annie Xie (currently PhD student at Stanford)  
Sudeep Dasari (currently PhD student at CMU)  
Russell Mendonca (incoming PhD student at CMU)  
Kyle Hsu (incoming PhD student at Stanford)  
Tom Knowles  
Alex Nam  
Annie Chen  
Behzad Haghighoo

### **Independent research:**

Mark Woodward (current Google AI resident)  
Rosen Kralev

## **Outreach**

- AI Research Mentoring Program, Co-Organizer** 2017-present  
Coordinating a research mentoring program for underrepresented undergraduates.  
Grew the program to UC Berkeley, Stanford, and CMU
- Berkeley AI & AI4ALL Camp, Co-Organizer** 2018  
Organized 5-day camp for underprivileged high-school students  
Free camp with hands-on introduction to CS and AI, aiming to increase diversity in AI.
- Berkeley AI & AI4ALL Camp, Co-Organizer** 2017  
Organized inaugural 2-day camp for 24 underprivileged high-school students  
Free camp with hands-on introduction to CS and AI, aiming to increase diversity in AI.
- Women in Machine Learning (WiML)** 2017-present  
Invited speaker, CoRL 2019  
Lunch mentor, ICML 2017, NeurIPS 2018, 2019  
Co-organized WiML evening event, CoRL 2017
- UC Berkeley Women in EECS, Outreach Co-coordinator** 2016-2017  
Organized events for minorities, with advice on pursuing research & grad school  
Organized day-long STEM exploration workshop for Girl Scouts.
- UC Berkeley Women in EECS, Co-President** 2015-2016

## Career Panels and Talks at Minorities in STEM events

2015-present

Inclusion@RSS, panelist, 2020

ICML NewInML Workshop, panelist, 2020

CVPR Women in Computer Vision Workshop, keynote, panelist, mentor, 2020

RSS Women in Robotics Workshop, speaker, 2020

CISCO Women Rock IT Live Broadcast, featured speaker, 2019

Khipu: Latin American Meeting in AI, Women in AI event, panelist 2019

CoRL Women in Machine Learning Lunch, speaker, 2019

Stanford-Berkeley Women in EECS Meet Up, speaker & panelist, 2015, 2019

Girls Programming League (GPL), keynote, 2019

Pioneers in Engineering (PiE) Kick-Off, keynote, 2018

Graduate Pathways to STEM, panelist, 2016

SWE Parent Education Outreach Program, panelist, 2017

NASA When I Grow Up Career Exploration Event, panelist, 2016

## Professional Activities

### Workshop Chair:

International Conference on Learning Representations (ICLR) 2021

### Area Chair:

Neural Information Processing Systems (NeurIPS) 2019, 2020

Robotics: Science and Systems (RSS) 2020

International Conference on Machine Learning (ICML) 2019, 2020

International Conference on Learning Representations (ICLR) 2019, 2020

Conference on Robot Learning (CoRL) 2018, 2019

### Paper Reviewing:

IEEE Robotics and Automation Letters (RA-L) 2016, 2017, 2018, 2019, 2020

IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2016, 2017, 2019

Robotics: Science and Systems (RSS) 2016, 2019

IEEE International Conference on Robotics and Automation (ICRA) 2016, 2017, 2018, 2019

Foundations and Trends in Machine Learning 2018

ACM Siggraph 2018

Neural Information Processing Systems (NIPS) 2016, 2017, 2018

International Conference on Machine Learning (ICML) 2017, 2018

International Conference on Learning Representations (ICLR) 2017, 2018

Conference on Robot Learning (CoRL) 2017

International Journal of Robotics Research (IJRR) 2016, 2017

Communications of the ACM 2016

### Workshop Organization:

Beyond "Tabula Rasa" in Reinforcement Learning Workshop, ICLR 2020

Deep Reinforcement Learning Workshop, NeurIPS 2019

Workshop on Learning with Rich Experience, NeurIPS 2019

Workshop on Multi-Task and Lifelong Reinforcement Learning, ICML 2019

Workshop on Imitation, Intent, and Interaction, ICML 2019

Workshop on Structures and Priors in Reinforcement Learning, ICLR 2019

Workshop on Deep Learning for Action and Interaction, NIPS 2016

## Selected Press Coverage

"Artificial Imagination: How machines could learn creativity and common sense, among other human qualities," by George Musser. Scientific American. May 2019.

"A Robot has Figured Out How to Use Tools," by Will Knight. MIT Technology Review. 11 April 2019.

"The Robots are Here: All they need is a brain," by Daniel Cossins. NewScientist. 2 February 2019.

"Don't Just Lecture Robots – Make Them Learn," by Matt Simon. Wired. 9 July, 2018.

"Robot learns by playing and imagines its own future," by Jonathan Bloom. ABC 7 News. 18 December 2017.

"Researchers train robots to see into the future," by John Biggs. TechCrunch. 8 December 2017.

"Building A.I. That Can Build A.I.," by Cade Metz. The New York Times. 5 November 2017.

"The Education of Brett the Robot," by Matt Simon. Wired. 21 September 2017.

"Google Builds a Robotic Hive-Mind Kindergarten," by Will Knight. MIT Technology Review. 3 October 2016.

"This Preschool is for Robots," by Jack Clark. Bloomberg Business. 2 September 2015.

"Robot Demonstrates Human-Like Learning Abilities," by Jonathan Bloom. ABC 7 News. 22 May 2015.

"Deep Learning Robots, DRC Practice, and Drone Pilot Competition," by Evan Ackerman. IEEE Spectrum. 22 May 2015.

"New approach trains robots to match human dexterity and speed," by John Markoff. The New York Times. 21 May 2015.