Roy Fox

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Appointment

2019–current **Assistant Professor**, *Department of Computer Science*, Donald Bren School of Information and Computer Science, University of California, Irvine

Affiliations: Intelligent Dynamics Lab (indylab) • Center for Machine Learning and Intelligent Systems (CML) • Department of Electrical Engineering and Computer Science (EECS) • HPI Research Center in Machine Learning and Data Science • Center for Theoretical Behavioral Sciences (CTBS) • Algorithms, Combinatorics, and Optimization Center (ACO)

Research and Industry Experience

2016–2019 **Postdoctoral Scholar**, *Department of Electrical Engineering and Computer Sciences*, University of California, Berkeley
Advisors: Ion Stoica and Ken Goldberg

Affiliations: Real-time Intelligent Secure Explainable Systems (RISELab) • Automation Lab (AUTOLAB) • Berkeley Artificial Intelligent Research (BAIR)

2012–2013 **Exchange PhD Student**, *Center for Theoretical Neuroscience*, Columbia University
Hosts: Larry Abbott and Liam Paninski

2011 **Research Intern**, Microsoft Research

Education

2017 **PhD**, *School of Computer Science and Engineering*, Hebrew University
Advisor: Naftali Tishby

Thesis: Information-Theoretic Methods for Planning and Learning in Partially Observable Markov Decision Processes

2008 **MS**, *Computer Science Department*, Technion IIT
Advisor: Moshe Tennenholtz

Thesis: Reinforcement Learning in Partially Observable Decision Processes

2001 **BS** (cum laude), *School of Computer Science*, Hebrew University

2000 **BS**, *Medical Sciences*, Hebrew University Hadassah Medical School

Grants and Awards

2024–current **NSF CISE: Large**, *Causal Foundations for Decision Making and Learning*
Role: Senior Personnel; PI: Elias Bareinboim; award: 2321786; amount: $5,000,000

2022 **Chancellor's Award for Excellence in Undergraduate Research**, UCI

2020–current **HPI Research Center**, *Machine Learning and Data Science*
Role: Supervisor; Director: Erik Sudderth; three fellowships support my students

2020 **ICS Research Award: Endeavor**, *AI for High-Level Computational Science*
Role: Key Personnel; PI: Eric Mjolsness; amount: $299,849

2018 **Workshop sponsorship**, *Infer to Control workshop at NeurIPS*
Sponsors: Intel and DeepMind; amount: $6500

2017 **Workshop sponsorship**, *Hierarchical Reinforcement Learning workshop at NeurIPS*
Sponsor: Intel; amount: $5000

2012–2013 **Research scholarship**, *The Gatsby Charitable Foundation*, Columbia University

2011 **First place**, *HUJICode* algorithmic programming competition, Hebrew University

1998 **Rector award for excellence**, Hebrew University

Publications

Conferences

NAACL 2024 Selective Perception: Learning Concise State Descriptions for Language Model Actors

Kolby Nottingham, Yasaman Razeghi, Kyungmin Kim, JB Lanier, Pierre Baldi, **Roy Fox**, and Sameer Singh
Annual Conference of the North American Chapter of the Association for Computational Linguistics

ICLR 2024 Toward Optimal Policy Population Growth in Two-Player Zero-Sum Games

Stephen McAleer, JB Lanier, Kevin Wang, Pierre Baldi, Tuomas Sandholm, and **Roy Fox**
12th International Conference on Learning Representations

ICML 2023 Do Embodied Agents Dream of Pixelated Sheep?: Embodied Decision Making using Language Guided World Modelling

Kolby Nottingham, Prithviraj Ammanabrolu, Alane Suhr, Yejin Choi, Hannaneh Hajishirzi, Sameer Singh, and **Roy Fox**
40th International Conference on Machine Learning

ICML 2023 Learning to Design Analog Circuits to Meet Threshold Specifications

Dmitrii Krylov, Pooya Khajeh, Junhan Ouyang, Thomas Reeves, Tongkai Liu, Hiba Ajmal, Hamidreza Aghasi, and **Roy Fox**
40th International Conference on Machine Learning

ICML 2022 Reducing Variance in Temporal-Difference Value Estimation via Ensemble of Deep Networks

Litian Liang, Yaosheng Xu, Stephen McAleer, Dailin Hu, Alexander Ihler, Pieter Abbeel, and **Roy Fox**
39th International Conference on Machine Learning

RLDM 2022 Learning to Query Internet Text for Informing Reinforcement Learning Agents

Kolby Nottingham, Alekhya Pyla, Sameer Singh, and **Roy Fox**
5th Multi-disciplinary Conference on Reinforcement Learning and Decision Making

AISTATS 2022 Independent Natural Policy Gradient Always Converges in Markov Potential Games

Roy Fox, Stephen McAleer, Will Overman, and Ioannis Panageas
25th International Conference on Artificial Intelligence and Statistics

NeurIPS 2021 XDO: A Double Oracle Algorithm for Extensive-Form Games

Stephen McAleer, JB Lanier, Kevin Wang, Pierre Baldi, and **Roy Fox**
35th Conference on Neural Information Processing Systems

NeurIPS 2020 Pipeline PSRO: A Scalable Approach for Finding Approximate Nash Equilibria in Large Games

Stephen McAleer, JB Lanier, **Roy Fox**, and Pierre Baldi
34th Conference on Neural Information Processing Systems

SPLASH AutoPandas: Neural-Backed Generators for Program Synthesis

OOPSLA 2019 Rohan Bavishi, Caroline Lemieux, **Roy Fox**, Koushik Sen, and Ion Stoica
10th ACM SIGPLAN Conference on Systems, Programming, Languages, and Applications: Software for Humanity

CASE 2019 Multi-Task Hierarchical Imitation Learning for Home Automation

Roy Fox*, Ron Berenstein*, Ion Stoica, and Ken Goldberg
15th IEEE Conference on Automation Science and Engineering

WAFR 2018 Generalizing Robot Imitation Learning with Invariant Hidden Semi-Markov Models

Ajay Kumar Tanwani, Jonathan Lee, Brijen Thananjeyan, Michael Laskey, Sanjay Krishnan, **Roy Fox**, Ken Goldberg, and Sylvain Calinon
13th International Workshop on the Algorithmic Foundations of Robotics

CASE 2018 Constraint Estimation and Derivative-Free Recovery for Robot Learning from Demonstrations

Jonathan Lee, Michael Laskey, **Roy Fox**, and Ken Goldberg
14th IEEE Conference on Automation Science and Engineering

ICML 2018 RLlib: Abstractions for Distributed Reinforcement Learning

Eric Liang*, Richard Liaw*, Robert Nishihara, Philipp Moritz, **Roy Fox**, Ken Goldberg, Joseph Gonzalez, Michael Jordan, and Ion Stoica
35th International Conference on Machine Learning

ICRA 2018 Fast and Reliable Autonomous Surgical Debridement with Cable-Driven Robots Using a Two-Phase Calibration Procedure

Daniel Seita, Sanjay Krishnan, **Roy Fox**, Stephen McKinley, John Canny, and Ken Goldberg
35th IEEE International Conference on Robotics and Automation

ICRA 2018 Robustly Adjusting Indoor Drip Irrigation Emitters with the Toyota HSR Robot

Ron Berenstein, **Roy Fox**, Stephen McKinley, Stefano Carpin, and Ken Goldberg
35th IEEE International Conference on Robotics and Automation

ICLR 2018 Parametrized Hierarchical Procedures for Neural Programming

Roy Fox, Richard Shin, Sanjay Krishnan, Ken Goldberg, Dawn Song, and Ion Stoica
6th International Conference on Learning Representations

CoRL 2017 DDCO: Discovery of Deep Continuous Options for Robot Learning from Demonstrations

Sanjay Krishnan*, **Roy Fox***, Ion Stoica, and Ken Goldberg
1st Conference on Robot Learning

CoRL 2017 DART: Noise Injection for Robust Imitation Learning

Michael Laskey, Jonathan Lee, **Roy Fox**, Anca Dragan, and Ken Goldberg
1st Conference on Robot Learning

CASE 2017 An Algorithm and User Study for Teaching Bilateral Manipulation via Iterated Best Response Demonstrations

Carolyn Chen, Sanjay Krishnan, Michael Laskey, **Roy Fox**, and Ken Goldberg
13th IEEE Conference on Automation Science and Engineering

CASE 2017 Statistical Data Cleaning for Deep Learning of Automation Tasks from Demonstrations

Caleb Chuck, Michael Laskey, Sanjay Krishnan, Ruta Joshi, **Roy Fox**, and Ken Goldberg
13th IEEE Conference on Automation Science and Engineering

CDC 2016 Minimum-Information LQG Control — Part I: Memoryless Controllers

Roy Fox and Naftali Tishby
55th IEEE Conference on Decision and Control

CDC 2016 Minimum-Information LQG Control — Part II: Retentive Controllers

Roy Fox and Naftali Tishby
55th IEEE Conference on Decision and Control

EWRL 2016 Principled Option Learning in Markov Decision Processes

Roy Fox*, Michal Moshkovitz*, and Naftali Tishby
13th European Workshop on Reinforcement Learning

UAI 2016 Taming the Noise in Reinforcement Learning via Soft Updates

Roy Fox*, Ari Pakman*, and Naftali Tishby
32nd Conference on Uncertainty in Artificial Intelligence

NeurIPS 2013 A Multi-Agent Control Framework for Co-Adaptation in Brain-Computer Interfaces

Josh Merel*, **Roy Fox***, Tony Jebara, and Liam Paninski
27th Annual Conference on Neural Information Processing Systems

ICML 2012 Bounded Planning in Passive POMDPs

Roy Fox and Naftali Tishby
29th International Conference on Machine Learning

AAAI 2007 A Reinforcement Learning Algorithm with Polynomial Interaction Complexity for Only-Costly-Observable MDPs

Roy Fox and Moshe Tennenholtz
22nd Conference on Artificial Intelligence

Symposia and Workshops

FMDM @ NeurIPS 2023 Selective Perception: Learning Concise State Descriptions for Language Model Actors

Kolby Nottingham, Yasaman Razeghi, Kyungmin Kim, JB Lanier, Pierre Baldi, **Roy Fox**, and Sameer Singh
Foundation Models for Decision Making workshop

RRL @ ICLR 2023 Do Embodied Agents Dream of Pixelated Sheep?: Embodied Decision Making using Language Guided World Modelling

Kolby Nottingham, Prithviraj Ammanabrolu, Alane Suhr, Yejin Choi, Hannaneh Hajishirzi, Sameer Singh, and **Roy Fox**
Reincarnating Reinforcement Learning workshop

DeepRL @ NeurIPS 2022 Feasible Adversarial Robust Reinforcement Learning for Underspecified Environments

JB Lanier, Stephen McAleer, Pierre Baldi, and **Roy Fox**
Deep Reinforcement Learning workshop

RLG — Anytime PSRO for Two-Player Zero-Sum Games

@ AAAI 2022 — Stephen McAleer, Kevin Wang, JB Lanier, Marc Lanctot, Pierre Baldi, Tuomas Sandholm, and **Roy Fox**
Reinforcement Learning in Games workshop

DeepRL — Temporal-Difference Value Estimation via Uncertainty-Guided Soft Updates

@ NeurIPS 2021 — Litian Liang, Yaosheng Xu, Stephen McAleer, Dailin Hu, Alexander Ihler, Pieter Abbeel, and **Roy Fox**
Deep Reinforcement Learning workshop

DeepRL @ NeurIPS 2021 — Count-Based Temperature Scheduling for Maximum Entropy Reinforcement Learning

Dailin Hu, Pieter Abbeel, and **Roy Fox**
Deep Reinforcement Learning workshop

DeepRL — Target Entropy Annealing for Discrete Soft Actor–Critic

@ NeurIPS 2021 — Yaosheng Xu, Dailin Hu, Litian Liang, Stephen McAleer, Pieter Abbeel, and **Roy Fox**
Deep Reinforcement Learning workshop

PRL @ ICAPS 2021 — Obtaining Approximately Admissible Heuristic Functions through Deep Reinforcement Learning and A* Search

Forest Agostinelli, Stephen McAleer, Alexander Shmakov, **Roy Fox**, Marco Valtorta, Biplav Srivastava, and Pierre Baldi
Bridging the Gap Between AI Planning and Reinforcement Learning workshop

EmbodiedAI — Modular Framework for Visuomotor Language Grounding

@ CVPR 2021 — Kolby Nottingham, Litian Liang, Daeyun Shin, Charless Fowlkes, **Roy Fox**, and Sameer Singh
Embodied AI workshop

RLG — CFR-DO: A Double Oracle Algorithm for Extensive-Form Games

@ AAAI 2021 — Stephen McAleer, John Lanier, Pierre Baldi, and **Roy Fox**
Reinforcement Learning in Games workshop

OPTRL — Toward Provably Unbiased Temporal-Difference Value Estimation

@ NeurIPS 2019 — **Roy Fox**
Optimization Foundations for Reinforcement Learning workshop

AMTL — Multi-Task Learning via Task Multi-Clustering

@ ICML 2019 — Andy Yan, Xin Wang, Ion Stoica, Joseph Gonzalez, and **Roy Fox**
Adaptive and Multitask Learning workshop

Infer2Control — Hierarchical Imitation Learning via Variational Inference of Control Programs

@ NeurIPS 2018 — **Roy Fox**, Richard Shin, William Paul, Yitian Zou, Dawn Song, Ken Goldberg, Pieter Abbeel, and Ion Stoica
Infer to Control: Probabilistic Reinforcement Learning and Structured Control workshop

DLT — An Empirical Exploration of Gradient Correlations in Deep Learning

@ NeurIPS 2018 — Daniel Rothchild, **Roy Fox**, Noah Golmant, Joseph Gonzalez, Michael Mahoney, Kai Rothauge, Ion Stoica, and Zhewei Yao
Integration of Deep Learning Theories workshop

ML for Sys — Neural Inference of API Functions from Input–Output Examples

@ NeurIPS 2018 — Rohan Bavishi, Caroline Lemieux, Neel Kant, **Roy Fox**, Koushik Sen, and Ion Stoica
Machine Learning for Systems workshop

NAMPI Imitation Learning of Hierarchical Programs via Variational Inference

@ ICML 2018 **Roy Fox***, Richard Shin*, Pieter Abbeel, Ken Goldberg, Dawn Song, and Ion Stoica
Neural Abstract Machines and Program Induction workshop

PGMRL Task-Relevant Embeddings for Robust Perception in Reinforcement Learning

@ ICML 2018 Eric Liang, **Roy Fox**, Joseph Gonzalez, and Ion Stoica
Prediction and Generative Modeling in Reinforcement Learning workshop

Causal Imit. Robot Learning with Invariant Hidden Semi-Markov Models

@ RSS 2018 Ajay Kumar Tanwani, Jonathon Lee, Michael Laskey, Sanjay Krishnan, **Roy Fox**, and Ken Goldberg
Perspectives on Robot Learning: Imitation and Causality workshop

DeepRL Ray RLlib: A Composable and Scalable Reinforcement Learning Library

@ NeurIPS 2017 Eric Liang*, Richard Liaw*, Robert Nishihara, Philipp Moritz, **Roy Fox**, Joseph Gonzalez, Ken Goldberg, and Ion Stoica
Deep Reinforcement Learning symposium

Theses

2016 Information-Theoretic Methods for Planning and Learning in Partially Observable Markov Decision Processes

Roy Fox
PhD Thesis, Hebrew University

2008 Reinforcement Learning in Partially Observable Decision Processes

Roy Fox
MS Thesis, Technion IIT

Preprints

2021 Improving Social Welfare while Preserving Autonomy via a Pareto Mediator

Stephen McAleer, JB Lanier, Michael Dennis, Pierre Baldi, and **Roy Fox**
arXiv:2106.03927

2021 A* Search Without Expansions: Learning Heuristic Functions with Deep Q-Networks

Forest Agostinelli, Alexander Shmakov, Stephen McAleer, **Roy Fox**, and Pierre Baldi
arXiv:2102.04518

2019 Hierarchical Variational Imitation Learning of Control Programs

Roy Fox, Richard Shin, William Paul, Yitian Zou, Dawn Song, Ken Goldberg, Pieter Abbeel, and Ion Stoica
arXiv:1912.12612

2017 Multi-Level Discovery of Deep Options

Roy Fox*, Sanjay Krishnan*, Ion Stoica, and Ken Goldberg
arXiv:1703.08294

2015 Optimal Selective Attention in Reactive Agents

Roy Fox and Naftali Tishby
arXiv:1512.08575

Talks and Presentations

Invited Talks

2024 How Large Models of Image and Text Help Agents to Learn to Behave

The Institute for Learning-enabled Optimization at Scale (TILOS), San Diego, March 20

2023 Population-Based Competitive Multi-Agent Reinforcement Learning

Information Theory and Applications workshop (ITA), San Diego, February 16

2023 Population-Based Methods for Single- and Multi-Agent Reinforcement Learning

Information Sciences Institute, University of Southern California, January 27

2022 Better Together: Population-Based Methods for Single- and Multi-Agent Reinforcement Learning

Department of Electrical and Computer Engineering, Technion IIT, Haifa, Israel, December 29

2020 Structured Control as Inference

Information Theory and Applications workshop (ITA), San Diego, February 7

2019 Learning Hierarchical Control Programs

- University of Michigan, Ann Arbor, April 11
- University of California, Irvine, March 19
- Université de Montréal, Canada, February 22

2018 Panel on Inference for Control, moderator

Infer to Control: Probabilistic Reinforcement Learning and Structured Control workshop (Infer2Control @ NeurIPS 2018), Montréal, Canada, December 8

2018 Hierarchical Imitation Learning of Robot Skills and Control Programs

- Google Research, Tel Aviv, Israel, November 15
- Department of Electrical Engineering, Technion IIT, Haifa, Israel, November 14

2017 Panel on Hierarchical Reinforcement Learning, moderator

Hierarchical Reinforcement Learning workshop (HRL @ NeurIPS), Long Beach, California, December 9

2017 Deep Hierarchical Reinforcement Learning Made Fast and Easy with Ray

Data Science Summit (DSS) Europe, Jerusalem, Israel, May 29

2016 An Information-Theoretic Bag of Tools for Optimal Control and Reinforcement Learning

Google DeepMind, London, UK, June 1

2016 Minimum-Information Planning in Partially-Observable Decision Problems

- Max Planck Institute for Mathematics in the Sciences, Leipzig, Germany, May 10
- University of Stuttgart, Germany, May 9

2015 Soft-Optimal Decisions under Uncertainty

Information and Decision Making workshop (IDeM), University of Hertfordshire, UK, September 3

2014 Optimal Selective Attention and Action in Reactive Agents

- University of California, Berkeley, October 8
- California Institute of Technology, Los Angeles, October 2
- University of California, Los Angeles, October 1
- University of California, San Diego, September 29
- Columbia University, New York, September 24
- Microsoft Research, New York, September 16
- University of Pennsylvania, Philadelphia, September 15

2012 Information Theoretic Methods for POMDP Planning

DARPA MSEE program review meeting, University of California, Los Angeles, May 2

Contributed Talks

2022 MeanQ: Reducing Variance in Temporal-Difference Value Estimation via Ensemble of Deep Networks

ICML spotlight, Baltimore, Maryland, July 21

2019 Multi-Task Hierarchical Imitation Learning for Home Automation

CASE, Vancouver, Canada, August 25

2016 Minimum-Information LQG Control

CDC double talk, Las Vegas, Nevada, December 14

2016 Taming the Noise in Reinforcement Learning via Soft Updates

UAI, Jersey City, New Jersey, June 26

2012 Bounded Planning in Passive POMDPs

ICML spotlight, Edinburgh, UK, June 27

2007 A Reinforcement Learning Algorithm with Polynomial Interaction Complexity for Only-Costly-Observable MDPs

AAAI, Vancouver, Canada, July 24

2007 A Reinforcement Learning Algorithm with Polynomial Interaction Complexity for Only-Costly-Observable MDPs

BISFAI, Ramat Gan, Israel, June 21

Departmental Talks

2022 Curiously Effective Ensemble and Double-Oracle Reinforcement Learning Methods

CML Seminar, University of California, Irvine, January 10

2020 When "Optimal Control" Isn't

- CS Seminar, University of California, Irvine, November 20
- IMBS Seminar, University of California, Irvine, April 17

2019 Hierarchical Imitation Learning of Robot Skills and Control Programs

RISE Retreat, University of California, Berkeley, January 17

2018 Multi-Task Hierarchical Imitation Learning of Robot Skills

- BAIR/CPAR/BDD Seminar, University of California, Berkeley, October 12
- RISE Seminar, University of California, Berkeley, October 8

2018 SkillHub: Shared Hierarchical Imitation Learning of Robot Control

RISE Retreat, University of California, Berkeley, May 23

2018 Parametrized Hierarchical Procedures for Neural Programming

RISE Retreat, University of California, Berkeley, January 10

2017 Discovery of Hierarchical Structure for Robot Learning and Neural Programming

BAIR/CPAR/BDD Seminar, University of California, Berkeley, November 3

2017 Reinforcement Learning Concepts

RISE Camp, University of California, Berkeley, September 7

2017 Multi-Level Discovery of Deep Options

- RISE–BDD Joint Mini-Retreat, University of California, Berkeley, May 2
- BAIR/CPAR/BDD Seminar, University of California, Berkeley, March 17

2017 Learning Control Hierarchies

RISE Retreat, University of California, Berkeley, January 11

2015 Soft-Optimal Decisions under Uncertainty

Machine Learning Club, Hebrew University, October 22

2013 Separating Inference and Control

The Center for Theoretical Neuroscience, Columbia University, May 13

2013 What to Notice and What to Remember: Finding Good Inference Policies

The Interdisciplinary Center for Neural Computation Retreat, Hebrew University, January 29

2012 Information Theory in Reinforcement Learning

- The Center for Theoretical Neuroscience, Columbia University, August 20
- Neural Data Analysis Seminar, Columbia University, May 22

2012 Bounded Planning in Passive POMDPs

Machine Learning Club, Hebrew University, March 15

2007 Reinforcement Learning in Partially Observable Decision Processes

Graduate Seminar, Technion IIT, November 4

Advising and Mentoring

Postdocs

2024–current Davide Corsi

PhD Students

2023–current Armin Karamzade

2022–current Dmitry Krylov

2021–current Kyungmin Kim

2021–current Alexander Shmakov (advised by Pierre Baldi)

2020–current JB Lanier (jointly with Pierre Baldi)

2020–current Kolby Nottingham (jointly with Sameer Singh)

Undergraduate Students

2023–current Montek Kalsi • Tony Liu • Yanran Wang

PhD Alumni

2019–2021 Stephen McAleer (advised by Pierre Baldi) → postdoc @ CMU

Past Visitors

2023–2024 Kat He → MS student @ Columbia

2022 Bryan Yu → ShieldAI

2021–2022 Kevin Wang → PhD student @ Brown

Master's Alumni

2022–2023 Alekhya Pyla → Pinterest
2021–2022 Ankita Sinha → Intuit
2020–2022 Dailin Hu → Blizzard
2020–2022 Andrew Jiang → Cisco
2020–2022 Alex Konrad (thesis) → Spatial Genomics

Undergraduate Alumni

2022–2023 Sushrut Borkar
2022–2023 Isabel Rosen → Microsoft
2022–2023 Zihao Zhu → MS student @ UCLA
2021–2023 Yifei Liu → MS student @ CMU
2021–2022 Xinyi Huang → Circle
2021–2022 Junhan Ouyang → DataVisor
2021–2022 Thomas Reeves → MS student @ USC
2021–2022 Jiawen Zhang → MS student @ UPenn
2020–2022 Litian Liang → MS student @ UCSD
2020–2022 Yaosheng Xu → MS student @ Harvard
2020–2021 Yongxuan Fu → MS student @ Brown
2020–2021 Yao Luo → MS student @ Columbia
2020–2021 Chinmay Tyagi → MS student @ GeorgiaTech
2020–2021 Yinfei Wang → Huawei
2020–2021 Ted Zadouri → MS student @ UCLA → PhD student @ Princeton
2019–2021 Carleton Zhao → Amazon
2019–2020 Dailin Hu → MS student @ UCI
2019–2020 Mingen Li → MS student @ UCSD
2019–2020 Bryon Tjanaka → PhD student @ USC
2019–2020 Catherine Yuan → General Atomics Aeronautical
2018–2019 William Paul → Johns Hopkins University Applied Physics Lab
2018–2019 Matthew Trepte → Nvidia
2018–2019 Andy Yan → MS student @ Berkeley
2018–2019 Yitian Zou → Uber
2017–2018 David Tseng → Microsoft
2014–2015 Itay Fried → Applied Materials
2014–2015 Erez Peterfreund → MS student @ Hebrew University → ⋯ → postdoc @ Yale

Teaching

Instruction

CS 200S **Seminar in Computer Science Research**, *Computer Science*, UC Irvine
Departmental seminar organizer; Fall 2021 – Spring 2024

CS 277 **Control and Reinforcement Learning**, *Computer Science*, UC Irvine
Winter 2020 • Winter 2021 • Winter 2022 • Winter 2024

CS 273A **Machine Learning**, *Computer Science*, UC Irvine
Winter 2021 • Fall 2021

CS 175 **Project in Artificial Intelligence**, *Computer Science*, UC Irvine
Winter 2020 • Fall 2021

76929 **Reinforcement Learning**, *Center for Brain Sciences*, Hebrew University
Winter 2014 • Winter 2015

Guest Lectures

Fall 2020 **AI/ML for Computational Science** (CS 295), *Computer Science*, UC Irvine

Fall 2019 **Honors Seminar** (CS H197), *Information and Computer Science*, UC Irvine

Professional Service

Workshop Organizer

2024 Heuristics and Search for Domain-independent Planning (HSDIP @ ICAPS)
Co-organizers: Sofia Lemons, Daniel Gnad, Clemens Büchner, Imène Ait Abderrahim

2018 Infer to Control: Probabilistic Reinforcement Learning and Structured Control workshop (Infer2Control @ NeurIPS)
Co-organizers: Leslie Kaelbling, Martin Riedmiller, Marc Toussaint, Igor Mordatch, Tuomas Haarnoja; estimated attendance: 650+

2017 Hierarchical Reinforcement Learning workshop (HRL @ NeurIPS)
Co-organizers: Andrew Barto, Doina Precup, Shie Mannor, Tom Schaul, Carlos Florensa; estimated attendance: 950+

Outreach

2021 UCI End Racism Initiative
Work group on *Representation: Recruitment and Outreach to Black Students*

Senior Program Committee Member / Meta-Reviewer

2024 IJCAI conference
2023 IJCAI conference • NeurIPS conference
2022 ICML conference • NeurIPS conference
2021 IJCAI conference
2020 IJCAI conference
2019 UAI conference

Session Chair / Moderator

2023 ITA workshop, Game Theory session chair
2022 ICML conference, Reinforcement Learning session chair
2022 NeurIPS conference, session chair
2021 IJCAI conference, Deep Reinforcement Learning session chair
2019 CASE conference, Service Robots session co-chair
2018 Infer2Control @ NeurIPS workshop, panel moderator
2017 HRL @ NeurIPS workshop, panel moderator
2016 CDC conference, Information Theory and Control session co-chair

Proposal Reviewer

2021 NSF CISE • NSF FRR

2020 CEREC • ISF • NSF CISE

2019 AI XPRIZE competition technical judge

Program Committee Member / Reviewer

2022 **Journals:** IEEE-TAC • **Conferences:** DeepMath • RLDM

2021 **Journals:** IEEE-TAC • JMLR • **Conferences:** ICRA • NeurIPS

2020 **Journals:** Artificial Intelligence • JMLR • **Conferences:** AAAI • CDC • DeepMath • IROS • RSS

2019 **Journals:** IJRR • JAAMAS • **Conferences:** CASE • ICML • ICRA • IJCAI • NeurIPS • RLDM • **Workshops:** HILL @ ICML • OPTRL @ NeurIPS • SPiRL @ ICLR

2018 **Journals:** Adaptive Behavior • IJRR • JAAMAS • **Conferences:** ICLR • ICML • NeurIPS • RSS • **Workshops:** Infer2Control @ NeurIPS

2017 **Conferences:** ICLR • NeurIPS • RSS • **Workshops:** HRL @ NeurIPS

2016 **Conferences:** NeurIPS