

Felipe Leno da Silva (Leno) *Ph.D. in Artificial Intelligence, Reinforcement Learning.*

leno@llnl.gov • Profile on Google Scholar: <https://scholar.google.com.br/citations?user=XbyIZQ4AAAAAJ>
San Francisco Bay Area, CA • USA • <https://f-leno.github.io>

Research Experience Keywords:

Artificial Intelligence, Machine Learning, Reinforcement Learning (RL), Computer Vision, Multiagent Systems

Recent Professional Experience

- Data Science Institute (DSI) Scientific Outreach Coordinator* REMOTE, USA
Lawrence Livermore National Lab 10/2023 – present
Organizing and coordinating seminars and workshops on AI, as well as supporting on setting objectives and the vision of how to promote and adopt AI as part of the DSI institute and the Lab as a whole.
- Staff Research Scientist* REMOTE, USA
Lawrence Livermore National Lab 12/2022 – present
Research on Reinforcement Learning applied to antibody therapeutics development, smart transportation, and other applications of national interest in the Optimization and Control Group.
- Postdoctoral Reinforcement Learning Researcher* LIVERMORE, CA, USA
Lawrence Livermore National Lab 04/2021 – 12/2022
Research on Reinforcement Learning applied to antibody therapeutics development, power converter automated design, and other applications of national interest.
- Postdoctoral Machine Learning Researcher* SÃO PAULO, BRAZIL
Advanced Institute for AI 12/2019 – 04/2021
Postdoctoral research investigating covariate shift for models predicting creditworthiness.
- Machine Learning Research Intern* EDMONTON, CANADA
Borealis AI (Royal Bank of Canada) 06/2019 – 08/2019
Research aiming at proposing techniques for better estimation of agent uncertainty on RL tasks. Performed at the Royal Bank of Canada under the supervision of Dr. Matthew E. Taylor.
-

Patent Applications

- SILVA, F. L.; HERNANDEZ-LEAL, P.; KARTAL, B.; TAYLOR, M. *System and Method for Uncertainty-based Advice for Deep Reinforcement Learning Agents.* U.S. Patent Application No. 17/011,310, 2021.
-

Selected Publications

Over 50 publications with over 1300 citations at various conference and journal venues.

- SILVA, F. L.; COSTA, A. H. R. *A Survey on Transfer Learning for Multiagent Reinforcement Learning Systems.* Journal of Artificial Intelligence Research (JAIR), v. 61, p. 645-703, 2019.
- SILVA, F. L.; et al. *Language Model-Accelerated Deep Symbolic Optimization.* Neural Computing and Applications, 2023.
- SILVA, F. L.; et al. *AutoTG: Reinforcement Learning-based Symbolic Optimization for AI-assisted Power Converter Design.* IEEE Journal of Emerging and Selected Topics in Industrial Electronics, 2023.
- SILVA, F. L.; et al. *Evaluating classification and feature selection techniques for Honeybee subspecies identification using wing images.* Computers and Electronics in Agriculture, v. 114, p. 68-77, 2015.
- PERAFAN, J. C. V.; SILVA, F. L.; et al. *Pairwise Registration in Indoor Environments using Adaptive Combination of 2D and 3D Cues* Image and Vision Computing, v. 69, p. 113-124, 2018.
- SILVA, F. L.; COSTA, A. H. R. *Transfer Learning for Multiagent Reinforcement Learning Systems.* Morgan Claypool Publishers (Book), 2021.
-

Recent Awards and Honors

- **Director's Science and Technology Award Recipient @ LLNL** 2022
 - **Directorate Award: Publication @ LLNL** 2022
-

Additional Academic and Research Experience

Workshop Organization

AI for Critical Infrastructure at IJCAI	2024
Adaptive Learning Agents (ALA) Workshop at AAMAS	2020 - 2022
Scaling-Up Reinforcement Learning Workshop at IJCAI and ECML/PKDD	2017, 2019
Workshop on Transfer in Reinforcement Learning at AAMAS	2017

Invited Talks

University of Michigan - Dearborn	2022
Workshop on Human-Aligned Reinforcement Learning for Autonomous Agents and Robots	2021

Guest Editor

Neural Computing and Applications (NCAA) Special Issue on Adaptive and Learning Agents	2020-2022
--	-----------

Senior Program Committee Member

AAAI Conference on Artificial Intelligence	2022
International Joint Conference on Artificial Intelligence (IJCAI)	2021

Program Committee Member/Reviewer

International Conference on Machine Learning (ICML)	2020
Conference on Neural Information Processing Systems (NeurIPS)	2021-2023
International Joint Conference on Artificial Intelligence (IJCAI)	2018, 2019
International Conference on Autonomous Agents and Multiagent Systems (AAMAS)	2020-2023
AAAI Conference on Artificial Intelligence (AAAI)	2021
International Conference on Robot Learning (ICRL)	2021, 2022

Panels

Agents, Ethics, and the Future of Research @ ALA Workshop	2023
---	------

Education

University of São Paulo, USP	SÃO PAULO, BRAZIL
partially carried out at the University of Texas at Austin	AUSTIN, USA
Ph.D. in Computer Engineering (FAPESP scholar)	03/2015 – 09/2019
<i>Transfer Learning for Multiagent Reinforcement Learning Systems</i> - This research aims at improving Multiagent Reinforcement Learning Algorithms to allow knowledge generalization and reuse across similar but different tasks.	
Advisors: Anna Helena Reali Costa (Brazil) and Peter Stone (USA)	
University of São Paulo, USP	SÃO PAULO, BRAZIL
M.Sc. in Computer Engineering (CNPq scholar)	02/2013 – 02/2015
<i>Automated Bee Species Identification through Wing Images</i> - This research studied methods to allow an automated bee species identification through Computer Vision and Machine Learning techniques applied to bee wing images.	
Advisor: Anna Helena Reali Costa	
Pontifical Catholic University of São Paulo, PUC-SP	SÃO PAULO, BRAZIL
B.S. in Computer Science (PROUNI scholar)	02/2009 – 12/2012
