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=XbyIZQ4AAAAJ
Los Angeles Metro Area, CA • USA • https://f-leno.github.io

Research Experience Keywords:

Reinforcement Learning (RL), Protein Design, Machine Learning, 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.

Senior Staff Research Scientist — REMOTE (USA)
Lawrence Livermore National Lab — *05/2024 – present*

Research focused on Machine Learning applied to varied applications, including ML for the development of Antibody Therapeutics in the context of GUIDE. Particularly involved in the antibody optimization and vaccines pilot trusts.

Staff Research Scientist — REMOTE (USA)
Lawrence Livermore National Lab — *12/2022 – 05/2024*

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.

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 1500 citations at various conference and journal venues.

DESAUTELS ,T. ; et al.; **SILVA, F. L.**; et al. *Computationally Restoring the Potency of a Clinical Antibody against Omicron.* Nature, v. 49, 2024.

ZHU ,F. ; et al.; **SILVA, F. L.**; et al. *Preemptive optimization of a clinical antibody for broad neutralization of SARS-CoV-2 variants and robustness against viral escape.* Science Advances, in press, 2025.

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.* EEE Journal of Emerging and Selected Topics in Industrial Electronics, 2023.

SILVA, F. L.; et al. *Coordination of Electric Vehicle Charging through Multiagent Reinforcement Learning* IEEE Transactions on Smart Grid, 2019.

Recent Awards and Honors

- **Innovation and Achievements Award @ LLNL** — *2025*
- **Director's Science and Technology Award Recipient @ LLNL** — *2022*
- **Directorate Award: Publication @ LLNL** — *2022*

Additional Academic and Research Experience

Workshop Organization

Strategy Alignment in AI Safety	*2025*
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 California Los Angeles - ECE Distinguished Seminar	*2025*
University of Michigan - Dearborn	*2022*
Workshop on Human-Aligned Reinforcement Learning for Autonomous Agents and Robots	*2021*

Guest Editor

SN Computer Science Special Issue on AI for Critical Infrastructure	*2025*
Neural Computing and Applications (NCAA) Special Issue on Adaptive and Learning Agents	*2020-2022*

Senior Program Committee Member

International Joint Conference on Artificial Intelligence (IJCAI)	*2021, 2025*
European Conference on Artificial Intelligence (ECAI)	*2024*
AAAI Conference on Artificial Intelligence	*2022*

Program Committee Member/Reviewer

International Conference on Machine Learning (ICML)	*2020-2022, 2024-2025*
Conference on Neural Information Processing Systems (NeurIPS)	*2021-2024*
International Joint Conference on Artificial Intelligence (IJCAI)	*2018, 2019, 2024*
International Conference on Autonomous Agents and Multiagent Systems (AAMAS)	*2020-2025*
AAAI Conference on Artificial Intelligence (AAAI)	*2021, 2024*
International Conference on Robot Learning (ICRL)	*2021-2025*

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*

Transfer Learning for Multiagent Reinforcement Learning Systems - 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*

Automated Bee Species Identification through Wing Images - 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*