

Felipe Leno da Silva (Leno) *D.Sc. student at Escola Politécnica da USP*

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Summary

Leno is a computer scientist working to push the boundaries of knowledge in the area of Artificial Intelligence. His main interest lies in Machine Learning, particularly in Reinforcement Learning, Supervised Learning, Computer Vision, and Multiagent Systems. Since his graduation, he has been deeply involved in academic research activities.

Education

Escola Politécnica of the University of São Paulo, USP

SÃO PAULO, BRAZIL

partially carried out at the University of Texas at Austin

AUSTIN, USA

D.Sc. in Computer Engineering, ongoing (FAPESP scholar)

03/2015 – present

Transfer Learning for Multiagent Reinforcement Learning Systems - This research aims at improving Multiagent Reinforcement Learning Algorithms to allow knowledge generalization and reuse among similar but different tasks.

Advisors: Anna Helena Reali Costa (Brazil) and Peter Stone (USA)

Escola Politécnica of the 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

Professional Experience

Visiting Researcher

University of Texas at Austin (Austin, USA)

2018 – present

I completed part of my doctoral studies at UT Austin under supervision of Professor Peter Stone.

Graduate Teaching Assistant

University of São Paulo, USP (São Paulo, Brazil)

07/2013 – 12/2014

My activities involved teaching classes and assignment preparation and correction. This work was done for the following subjects: (i) *Laboratory of the Foundations of Computing Engineering*, and (ii) *Foundations of Computer Engineering*.

System Analyst

TOTVS (São Paulo, Brazil)

2010 – 2013

Development and maintenance of ERP systems for small companies.

Awards and Honors

- **HLC: Outstanding Young Researcher at the 6th Heidelberg Laureate Forum.** 2018
 - **AAAI: Honorable mention as Best Student Poster at the 31st AAAI conference.** 2017
 - **BRACIS: Best Paper Award at the 5th BRACIS conference.** 2016
 - **WPG-EC: One of the Best Research Projects in the department, USP.** 2013, 2014, 2017
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Selected Conference Publications

- SILVA, F. L.;** COSTA, A. H. R. *Object-Oriented Curriculum Generation for Reinforcement Learning*. Int. Conf. on Autonomous Agents and Multiagent Systems (AAMAS), 2018.
- SILVA, F. L.;** GLATT, R.; COSTA, A. H. R. *Simultaneously Learning and Advising in Multiagent Reinforcement Learning*. Int. Conf. on Autonomous Agents and Multiagent Systems (AAMAS), p. 1100–1108, 2017.
- SILVA, F. L.;** COSTA, A. H. R. *Towards Zero-Shot Autonomous Inter-Task Mapping through Object-Oriented Task Description*. 1st Workshop on Transfer in Reinforcement Learning (TiRL) at AAMAS-17, 2017.
- SILVA, F. L.;** GLATT, R.; COSTA, A. H. R. *Object-Oriented Reinforcement Learning in Cooperative Multiagent Domains*. Brazilian Conference on Intelligent System (BRACIS), p. 19-24, 2016.
- GLATT, R.; **SILVA, F. L.;** COSTA, A. H. R. *Towards Knowledge Transfer in Deep Reinforcement Learning*. Brazilian Conference on Intelligent System (BRACIS), p. 91-96, 2016.
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Selected Journal Publications

- SILVA, F. L.;** GLATT, R.; COSTA, A. H. R. *MOO-MDP: An Object-Oriented Representation for Cooperative Multiagent Reinforcement Learning*. IEEE Transactions on Cybernetics, to appear, 2018.
- SILVA, F. L.;** SELLA, M. L. G.; FRANCOY, T. M.; COSTA, A. H. R. *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.;** JACOMINI, R. S.; COSTA, A. H. R. *Pairwise Registration in Indoor Environments using Adaptive Combination of 2D and 3D Cues Image and Vision Computing*, v. 69, p. 113-124, 2018.
- SANTANA, F. S.; COSTA, A. H. R.; TRUZZI, F. S.; **SILVA, F. L.;** SANTOS, S. L.; FRANCOY, T. M.; SARAIVA, A. M. *A reference process for automating bee species identification based on wing images and digital image processing*. Ecological Informatics, v. 24, p. 248-260, 2014.
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Additional Academic and Research Experience

Workshop Organization

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| 1st Workshop on Transfer in Reinforcement Learning at AAMAS
Local Organization. | 2017 |
| 1st Scaling-Up Reinforcement Learning Workshop at ECML PKDD
Workshop Chair. | 2017 |

Program Committee Member/Reviewer

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| PAPIs Europe | 2018 |
| 18th Adaptive Learning Agents Workshop at AAMAS (ALA) | 2018 |
| 10th International Conference on Agents and Artificial Intelligence (ICAART) | 2018 |
| 1st Workshop on Transfer in Reinforcement Learning at AAMAS (TiRL) | 2017 |
| 4th Brazilian Conference on Intelligent Systems (BRACIS) | 2015 |

Scientific Journal Referee

2015 – present

- Neurocomputing
- IEEE Transactions on Systems, Man, and Cybernetics: Systems
- IET Image Processing
- Journal of Telecommunications System & Management
- Journal of Computational Methods in Sciences and Engineering
- International Journal of Engineering and Technology Innovation

Undergraduate Research Co-mentor

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| University of São Paulo, USP | 2015 – 2018 |
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Undergraduate Thesis Committee Member

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| Faculdade de Tecnologia Termomecânica, FTT | 2013 – 2014 |
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