

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

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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
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Professional Experience

- Visiting Researcher*
University of Texas at Austin (Austin, USA) 2018 – present
I am carrying out 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.
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Awards and Honors

- **First Place:** 311 Calls and 500 Cities Data Science Hackaton at UT Austin. 2018
 - **HLC:** Outstanding Young Researcher at the 6th Heidelberg Laureate Forum. 2018
 - **Dagstuhl:** Invited to the *Automating Data Science* Seminar at Schloss Dagstuhl. 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.; TAYLOR, M. E.; COSTA, A. H. R. *Autonomously Reusing Knowledge in Multiagent Reinforcement Learning*. International Joint Conference on Artificial Intelligence (IJCAI), 2018.
- 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.; COSTA, A. H. R. *A Survey on Transfer Learning for Multiagent Reinforcement Learning Systems*. Journal of Artificial Intelligence Research (JAIR), to appear, 2019.
- SILVA, F. L.; GLATT, R.; COSTA, A. H. R. *MOO-MDP: An Object-Oriented Representation for Cooperative Multiagent Reinforcement Learning*. IEEE Transactions on Cybernetics, v. 49(2), p.567-579, 2019.
- 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 | 2017 |
| Local Organization. | |
| 1st Scaling-Up Reinforcement Learning Workshop at ECML PKDD | 2017 |
| Workshop Chair. | |

Program Committee Member/Reviewer

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| International Joint Conference on Artificial Intelligence (IJCAI) | 2018 |
| PAPIS | 2018, 2019 |
| Adaptive Learning Agents Workshop at AAMAS (ALA) | 2018, 2019 |
| International Conference on Agents and Artificial Intelligence (ICAART) | 2018 |
| Brazilian Conference on Intelligent Systems (BRACIS) | 2015, 2018 |

Scientific Journal Referee

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|---|----------------|
| IEEE Transactions on Cybernetics | 2015 – present |
| Neurocomputing | |
| IEEE Transactions on Systems, Man, and Cybernetics: Systems | |
| IET Image Processing | |

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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