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.

Current Goal: Research Internship

Education

Escola Politécnica da Universidade de São Paulo, USP   São Paulo, Brazil
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.
(Advisor: Prof. Dr. Anna Helena Reali Costa)

Escola Politécnica da Universidade de 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: Prof. Dr. 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*

Selected Conference Publications

SILVA, F. L.; GLATT, R.; COSTA, A. H. R. *Simultaneously Learning and Advising in Multiagent Reinforcement Learning.* Int. Conference on Autonomous Agents and Multiagent Systems (AAMAS), Accepted - 2017.

SILVA, F. L.; COSTA, A. H. R. *Accelerating Multiagent Reinforcement Learning through Transfer Learning (Doctoral Consortium).* AAAI Conference on Artificial Intelligence, Accepted - 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.

SILVA, F. L.; COSTA, A. H. R. *Transfer Learning for Multiagent Reinforcement Learning Systems (Doctoral Consortium).* International Joint Conference on Artificial Intelligence (IJCAI), p. 3982-3983 - 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.

Journal Publications

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

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.

Selected Submitted Papers

SILVA, F. L.; GLATT, R.; COSTA, A. H. R. *MOO-MDP: An Object-Oriented Representation for Cooperative Multiagent Reinforcement Learning.* Applied Soft Computing, Elsevier.

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.

Additional Academic and Research Experience

Graduate Teaching Assistant
University of São Paulo, USP *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*.

Local Workshop Organizing Committee
1st Workshop on Transfer in Reinforcement Learning at AAMAS *2017*

I am currently assisting on the workshop organization, which includes Program Committee recruiting, workshop program definition, advertisement, and sponsorship proposals.

Workshop PC Member
1st Workshop on Transfer in Reinforcement Learning at AAMAS *2017*

Scientific Journal Referee
2015 – present

Journal of Telecommunications System & Management
Journal of Computational Methods in Sciences and Engineering
International Journal of Engineering and Technology Innovation
IET Image Processing

Manuscript review and evaluation for scientific journals.

Undergraduate Research Co-mentor
University of São Paulo, USP *2015 – present*

I have been providing mentorship for undergrad students researching on the topics *Automated Bee Species Identification* and *Multiagent Reinforcement Learning*.

Undergraduate Thesis Committee Member
Faculdade de Tecnologia Termomecânica, FTT *2013 – 2014*

I have actuated as a Committee Member for several Undergraduate Thesis, mostly in projects related to Machine Learning.

Attended Conferences

AAAI : AAAI Conference on Artificial Intelligence (in February) 2017
Presentation in the Doctoral Consortium.

IJCAI : International Joint Conference on Artificial Intelligence 2016
Participation at IJCAI as a student volunteer, including a presentation in the Doctoral Consortium.

BRACIS : Brazilian Conference on Intelligent Systems 2014,2016
Participation at BRACIS conference, including full paper presentations (one of them was awarded with the *best paper* prize).

Professional Experience

System Analist
São Paulo (Brazil)
TOTVS *2010 – 2013*

System Analyst: Development and maintenance of ERP systems for small companies.

Awards

Best Paper Award
BRACIS *2016*

1st place: *Object-Oriented Reinforcement Learning in Cooperative Multiagent Domains*.