Felipe Leno da Silva (Leno) PhD 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 as a graduate student fellow.

Education

Escola Politécnica da Universidade de São Paulo, USP

São Paulo, Brazil

Ph.D. 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 02/2009 – 12/2012

B.S. in Computer Science (PROUNI scholar)

Main Publications

- **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.
- **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.
- 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.

Pending Publications (Submitted)

- **SILVA, F. L.**; COSTA, A. H. R. Coordination of Electric Vehicle Charging through Multiagent Reinforcement Learning. Engineering Applications of Artificial Intelligence.
- VILLOTA, J. C. P.; **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.

Additional Academic and Research Experience

Graduate Teaching Assistant

University of São Paulo, USP

07/2013 - 12/2014

Student tutoring, which involves 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.*

Scientific Journal Referee

2015 - present

Journal of Telecommunications System & Management

Journal of Computational Methods in Sciences and Engineering

IET Image Processing

Manuscript review and evaluation for scientific journals.

Conference Subreviewer

BRACIS - Brazilian Conference on Intelligent Systems

SBAI - Brazilian Symposium on Intelligent Automation

RoboCup Symposium

2015

Undergraduate Research Co-mentor

University of São Paulo, USP

2015 – *present*

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

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

Attended Conferences

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/ENIAC joint conference, including a full paper presentation in the main conference (2016) and in the co-located KDMILE Symposium (2014).

WPG-EC: Workshop of Graduate Studies on Computing Engineering Presentation of extended abstracts at WPG-EC.

2013, 2014, and 2015

Professional Experience

System Analist
TOTVS
SÃO PAULO (BRAZIL)
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.

Honorable Mentions

WPG-EC: Workshop of Graduate Studies on Computing Engineering

2013 - 2014

The extended abstract presented at WPG-EC received Honorable Mentions in 2013 and 2014 for the research project *Automated Bee Species Identification through Wing Images*.

Travel Grants

IJCAI-16 DC Travel Grants.

2016