Distinguished Guest Professor Arlindo Manuel, Limede De Oliveira
Department of Engineering and Science, Faculty of Innovation Engineering
Macau University of Science and Technology

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Academic Qualification
Ph.D. in University of California, Berkeley
Master in Instituto Superior Técnico
Bachelor in Instituto Superior Técnico

Teaching Area
Computer architecture
Electronics for computers
Machine learning
Compilers
Algorithm design
Algorithms and data structures
Introduction to Programming
Decision support systems
Functional genomics and bioinformatics
Biological applications of algorithms
Computational biology
Neuroengineering

Research Area
Algorithms
Machine Learning
Artificial Intelligence
Bioinformatics
CAD

Professional Services

2020	Reviewer of proposals for the Volkswagen Foundation, for the call for projects on Digitalization in Natural Sciences
2018 ~ 2020	Reviewer of projects for the Romanian Executive Agency for Higher Education, Research, Development and Innovation Funding
2020	Reviewer of projects in AI financed by Science Fund of the Republic of Serbia
2018 ~ present	Member of the Editorial Board of journal Genes
2017	Reviewer of projects for the European Commission, for call EINFRA-21-2017: Platform-driven e-infrastructure innovation
2015	Reviewer of projects for the Human Brain Project initiative
2014	Reviewer of projects for the Netherlands Organization for Scientific Research
2006 ~ 2008	Coordinator of the evaluation of the countrywide program for PhD and postdoctoral fellowships, in Computer Science, granted by the Portuguese funding agency, FCT (http://alfa.fct.mctes.pt/apoios/bolsas/).
2006 ~ 2008	Coordinator of the evaluation of national research projects, in Computer Science, financed by the Portuguese funding agency, FCT (http://www.fct.mctes.pt/pt/apoios/projectos/)
2005 ~ 2006	Evaluator of project proposals in the sixth framework program of the European Commission
2005 ~ 2006	Reviewer of projects financed by the sixth framework program of theEuropean Commission
2005 ~ 2008	Evaluator of undergraduate and graduate degrees proposals by Portuguese universities in the area of Computer Science and Informatics, nominated by the Portuguese Ministry for Science and Technology

Member of the Technical Program Committee of the Conferences (amongst others)
- ECML: European Conference on Machine Learning (2005, 2006, 2007, 2008,2009,2010)
- RECOMB: International Conference on Research in Computational Molecular Biology (2010,3013,2014)
- PKDD: Principles and Practice of Knowledge Discovery in Databases (2005, 2006, 2007,

2008,2009,2010)
- ICGI: International Colloquium on Grammatical Inference (2000, 2002, 2004, 2006, 2008,2010)
- ECIR: European Conference on Information Retrieval (2007, 2008)
- ESANN: European Symposium on Artificial Neural Networks (2004, 2005, 2006, 2007, 2008,2009,2010)
- DATE: Design, Automation and Test in Europe (2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008)
- CIKM: Conference on Information and Knowledge Management (2007, 2008, 2009, 2010, 2011, 2012, 2013)
- DAWAK: International Conference on Data Warehousing and Knowledge Discovery (2006, 2007)
- ADMA: International Conference on Advanced Data Mining and Applications (2005, 2006)
- APBC: Asia Pacific Bioinformatics Conference (2014, 2015, 2016, 2017, 2018)
- SPIRE: Symposium on String Processing and Information Retrieval (1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007)
- GIW: International Conference on Genome Informatics (2016)

Editor of a special issue on String Processing and Information Retrieval of the Journal of Discrete Algorithms.

Reviewer for the journals:
- Artificial Intelligence in Medicine
- Drug Safety
- IEEE Transactions on Computational Biology and Bioinformatics, IEEE Press.
- Bioinformatics, Oxford Journals.
- Nucleic Acids Research, Oxford Journals.
- BMC Bioinformatics, BioMed Central.
- International Journal of Applied Mathematics and Computer Science
- Journal of Combinatorial Optimization, Springer.
- Computers and Graphics, Elsevier.
- Journal of Machine Learning Research, International Consortium for the Advancement of Academic Pub.
- In Silico Biology, IOS Press.
- Theoretical Computer Science, Elsevier.
- The Computer Journal, British Computer Society
- Grammars, Springer.
- Machine Learning, Kluwer Academic Publishers.
- Neural Computation, MIT Press.
- Operations Research, Institute for Operations Research and the Management Sciences.
- EURASIP Journal on Bioinformatics and Systems Biology, Hindawi Publishing Corporation.
- IEEE Transactions on Knowledge Discovery and Data Engineering, IEEE
- IEEE Transactions on Computers, IEEE
- IEEE Transactions on Computer Aided Design, IEEE
- IEEE Transactions on VLSI Systems, IEEE
- IEEE Journal of Solid-State Circuits, IEEE
- IEEE Transactions on Neural Networks, IEEE
- IEEE Transactions on Circuits and Systems, IEEE
- IEEE Transactions on Systems, Man and Cybernetics, IEEE
- Pattern Recognition Letters, Elsevier.
- IEEE Intelligent Systems, IEEE
- IEE Proceedings on Computers and Digital Techniques, IEE
- ACM Transactions on Design Automation of Electronic Systems, ACM Press.
- Information Processing Letters, Elsevier
- Journal of Combinatorial Optimization, Springer
- Computational Statistics and Data Analysis, Elsevier
- Journal of Bioinformatics and Computational Biology, Imperial College Press

Working Experience
2005 ~ present, Distinguished (Full) Professor, Instituto Superior Técnico (IST), University of Lisbon
2021 ~ present, President, INESC
2020 ~ present, Member, Board of Caixa Geral de Depositos
1995 ~ present, Senior Researcher, INESC-ID
2020 ~ present, Founder and Principal Investigador, Machine Learning and Knowledge Discovery group of INESC-ID
2022, Visiting Researcher, Tokyo University
2022, Visiting Professor, MIT

2012 ~ 2019, President, Instituto Superior Tecnico
2009 ~ 2011, Vice-President for Administrative and Financial Affairs, Instituto Superior Tecnico
2002 ~ 2014, Member and co-founder of the Knowledge Discovery and Bioinformatics (KDBIO) research group
2012 ~ 2014, Member, Board of Directors (non-executive) of Taguspark S.A.
2007 ~ 2008, Chair of the Department of Computer Science and Engineering, Instituto Superior Tecnico
2009 ~ 2020, Member, Board of Directors of INESC
2014 ~ 2019, Member, Board of Directors of CESAER, the Conference of European Schools for Advanced Engineering Education and Research
2004 ~ 2009, President, INESC-ID
2004 ~ 2005, President, Portuguese Association for Artificial Intelligence (APPIA)
2000 ~ 2003, Member, Executive Board of INESC-ID
2000 ~ 2005, Associate Professor, Instituto Superior Tecnico
2015 ~ 2018, Head, Portuguese Node of ELIXIR Europe
1995 ~ 2000, Assistant Professor, Instituto Superior Tecnico
1986 ~ 1994, Teaching Assistant, Instituto Superior Tecnico
1996 ~ 2009, Research Associate, Cadence Research Laboratories, Berkeley, CA
1995 ~ 1999, Senior Researcher, INESC
1989 ~ 1994, Researcher, Electronics Research Laboratory of UC Berkeley
1986, Junior Researcher, CERN

Academic Publication (selected)
Books
1. Arlindo L. Oliveira, The Digital Mind, MIT Press (https://mitpress.mit.edu/books/digital-mind), 2017
2. Arlindo L. Oliveira, Mentes Digitais (Portuguese edition of The Digital Mind), IST Press (http://istpress.tecnico.ulisboa.pt/node/464), 2018
3. Arlindo L. Oliveira, 数字思维 阿林多奥利维拉 著 智能未来 思维智能 人类社会变革 中信出版社图书 (Chinese edition of The Digital Mind), CITIC Press, (https://item.jd.com/65401942612.html), 2020
4. Guilherme S. Arroz, José C. Monteiro, Arlindo L. Oliveira, Arquitectura de computadores: dos Sistemas Digitais aos Microprocessadores, IST Press (http://istpress.ist.utl.pt/larquitecturacomp.htm), 2007
5. Guilherme S. Arroz, José C. Monteiro, Arlindo L. Oliveira , Digital Systems to Microprocessors, World Scientific (https://www.worldscientific.com/worldscibooks/10.1142/10940), 2018
6. Inteligência Artificial, Fundação Francisco Manuel dos Santos (https://www.ffms.pt/publicacoes/detalhe/2878/inteligencia-artificial), 2019
7. Mário Nascimento and Edleno S. Moura and Arlindo L. Oliveira, editors, String Processing and Information Retrieval (10th SPIRE), Lecture Notes in Computer Science 2857, Oct. 2003, Springer
8. Alberto Laender and Arlindo L. Oliveira, editors, String Processing and Information Retrieval (9th SPIRE), Lecture Notes in Computer Science 2476, Sep. 2002, Springer
9. Arlindo L. Oliveira, editor, Grammatical Inference : Algorithms and Applications (5th ICGI), Lecture Notes in Computer Science 1891, Sep. 2000, Springer

Journal Article
1. Beatriz Valente Silva, João Marques, Miguel Nobre Menezes, Arlindo L. Oliveira, Fausto J. Pinto, Artificial intelligence-based diagnosis of acute pulmonary embolism: Development of a machine learning model using 12-lead electrocardiogram, **Revista Portuguesa de Cardiologia**, 2023.
2. Miguel Menezes, João Silva, Beatriz Silva, Tiago Rodrigues, Cláudio Guerreiro, João Guedes, Manuel Santos, Arlindo L. Oliveira, Fausto J. Pinto, Coronary X-ray angiography segmentation using Artificial Intelligence: a multicentric validation study of a deep learning model, **The International Journal of Cardiovascular Imaging**, 2023.
3. Arlindo L. Oliveira, A blueprint for conscious machines, Proceedings of the National Academy of Sciences 119 (23), 2022.
4. Mário Cardoso, André Cavalheiro, Alexandre Borges, Ana F Duarte, Amílcar Soares, Maria João Pereira, Nuno Jardim Nunes, Leonardo Azevedo, Arlindo L Oliveira, Modeling the geospatial evolution of COVID-19 using spatio-temporal convolutional sequence-to-sequence neural networks, **ACM Transactions on Spatial Algorithms and Systems**, 2022.
5. Miguel Nobre Menezes, João Lourenço-Silva, Beatriz Silva, Oliveira Rodrigues, Ana Rita G Francisco, Pedro Carrilho Ferreira, Arlindo L Oliveira, Fausto J Pinto, Development of deep learning segmentation models for coronary X-ray angiography: Quality assessment by a new global segmentation score and comparison with human performance, **Revista Portuguesa de Cardiologia**, 2022.
6. Jon Ison, Hans Ienasescu, Piotr Chmura, Emil Rydza, Hervé Ménager, Matúš Kalaš, Veit Schwämmle, Björn Grüning, Niall Beard, Rodrigo Lopez, Severine Duvaud, Heinz Stockinger, Bengt Persson, Radka Svobodová Vařeková, Tomáš Raček, Jiří Vondrášek, Hedi Peterson, Ahto Salumets, Inge

Jonassen, Rob Hooft, Tommi Nyrönen, Alfonso Valencia, Salvador Capella, Josep Gelpí, Federico Zambelli, Babis Savakis, Brane Leskošek, Kristoffer Rapacki, Christophe Blanchet, Rafael Jimenez, Arlindo L. Oliveira, Gert Vriend, Olivier Collin, Jacques van Helden, Peter Løngreen & Søren Brunak, The bio.tools registry of software tools and data resources for the life sciences, **Genome Biology**, vol. 20, 164, Aug. 2019.

7. Arlindo L. Oliveira, Biotechnology, Big Data and Artificial Intelligence, **Biotechnology Journal**, vol. 14, 1800613, 2019.

8. Stefan Winzeck, Arsany Hakim, Richard McKinley, José Pinto, Victor Alves, Carlos Silva, Maxim Pisov, Egor Krivov, Mikhail Belyaev, Miguel Monteiro, Arlindo L. Oliveira, Youngwon Choi, Myunghee Cho Paik, Yongchan Kwon, Hanbyul Lee, Beom Joon Kim, Joong-Ho Won, Mobarakol Islam, Hongliang Ren, David Robben, Paul Suetens, Enhao Gong, Yilin Niu, Junshen Xu, John M Pauly, Christian Lucas, Mattias P Heinrich, Luis C Rivera, Laura S Castillo, Laura A Daza, Andrew L Beers, Pablo Arbelaezs, Oskar Maier, Ken Chang, James M Brown, Jayashree Kalpathy-Cramer, Greg Zaharchuk, Roland Wiest, Mauricio Reyes, ISLES 2016 and 2017-benchmarking ischemic stroke lesion outcome prediction based on multispectral MRI, **Frontiers in Neurology** vol. 9, 679, Sep. 2018.

9. Miguel Monteiro and Ana Catarina Fonseca and Ana T. Freitas and Teresa Pinho e Melo and A. P. Francisco and José M. Ferro and Arlindo L. Oliveira, Using Machine Learning to Improve the Prediction of Functional Outcome in Ischemic Stroke Patients, article in ACM/IEEE Transactions on **Computational Biology and Bioinformatics** vol. 15 (6) pp. 1953-1959, Mar. 2018.

10. André Veríssimo and Arlindo L. Oliveira and Marie-France Sagot and Susana Vinga, DegreeCox–a network-based regularization method for survival analysis, **BMC Binformatics**, 17(16), 449,Dec 2016.

11. Miguel Teixeira and Pedro T. Monteiro and Joana Guerreiro and Joana Gonçalves and Nuno Mira and Sandra dos Santos and Tânia Cabrito and Margarida Palma and Catarina Costa and A. P. Francisco and Sara C. Madeira and Arlindo L. Oliveira and Ana T. Freitas and Isabel Sá-Correia, The YEASTRACT database: an upgraded information system for the analysis of gene and genomic transcription regulation in Saccharomyces cerevisiae, **Nucleic Acids Research**, Jan 2014.

12. Orlando Anunciação and Susana Vinga and Arlindo L. Oliveira, Using Information Interaction to Discover Epistatic Effects in Complex Diseases, **PLoS ONE**, 8(10), pp. , Oct. 2013.

13. A. P. Francisco and R. Baeza-Yates and Arlindo L. Oliveira, Mining query log graphs towards a query folksonomy, **Concurrency and Computation: Practice and Experience**, (1), Dec. 2012.

14. Dário Abdulrehman and Pedro T. Monteiro and Miguel C. Teixeira and Nuno P. Mira and Artur B. Lourenço and Sónia C. dos Santos and Tânia R. Cabrito and A. P. Francisco and Sara C. Madeira and Ricardo Rubén dos Santos Aires and Arlindo L. Oliveira and Isabel Sá-Correia and Ana T. Freitas, YEASTRACT: Providing a programmatic access to curated transcriptional regulatory associations in Saccharomyces cerevisiae through a web services interface, **Nucleic Acids Research**, 39(1), pp. D136-D140 , Jan. 2011

15. Dulce Calçada and Susana Vinga and Ana T. Freitas and Arlindo L. Oliveira, Quantitative modeling of the Saccharomyces cerevisiae FLR1 Regulatory Network using an S-System Formalism, **Journal of Bioinformatics and Computational Biology**, 9(5), pp. , Oct. 2011, World Scientific.

16. Luís M. S. Russo and Gonzalo Navarro and Arlindo L. Oliveira, Fully-Compressed Suffix Trees, ACM **Transactions on Algorithms**, 7(4), Sep. 2011, ACM.

17. Pedro T. Monteiro and Paulo J. Dias and Delphine Ropers and Arlindo L. Oliveira and Isabel Sá-Correia and Miguel C. Teixeira and Ana T. Freitas, Qualitative modelling and formal verification of the FLR1 gene mancozeb response in Saccharomyces cerevisiae, IET Systems Biology, 5(5), pp. 308-316, Sep. 2011, IET.

18. Joana P. Gonçalves and A. P. Francisco and Nuno P. Mira and Miguel C. Teixeira and Isabel Sá-Correia and Arlindo L. Oliveira and Sara C. Madeira, TFRank: network-based prioritization of regulatory associations underlying transcriptional responses, **Bioinformatics**, 27(22), pp. 3149–3157, Nov. 2011, Oxford University Press.

19. Alexandra M. Carvalho and Teemu Roos and Arlindo L. Oliveira and Petri Myllymäki, Discriminative learning of Bayesian networks via factorized conditional log-likelihood, **Journal of Machine Learning Research**, 12(7), pp. 2181-2210, Jul. 2011.

20. Francisco Fernandes and Paulo G. S. da Fonseca and Luís M. S. Russo and Arlindo L. Oliveira and Ana T. Freitas,Efficient alignment of pyrosequencing reads for resequencing applications, **BMC Bioinformatics**, 12(163), Jun. 2011, BioMed Central.

21. Alexandra M. Carvalho and Arlindo L. Oliveira, GRISOTTO: A greedy approach to improve combinatorial algorithms for motif discovery with prior knowledge, **Algorithms for Molecular Biology**, 6(13), Apr. 2011.

22. Ana Sofia Graça and Joao Marques Silva and Inês Lynce and Arlindo L. Oliveira, Haplotype inference with pseudo-Boolean optimization, **Annals of Operations Research**, 184(1), pp. 137-162, Jan. 2011, Springer.

23. Ana Sofia Graça and Inês Lynce and Joao Marques Silva and Arlindo L. Oliveira, Haplotype Inference by Pure Parsimony: a Survey, **Journal of Computational Biology**, 17(8), pp. 969–992, Aug. 2010, Mary Ann Liebert, Inc.

24. Miguel C. Teixeira and Paulo J. Dias and Pedro T. Monteiro and Arlindo L. Oliveira and Ana T. Freitas and Isabel Sá-Correia, Refining current knowledge on the yeast FLR1 regulatory network by combined experimental and computational approaches, **Molecular BioSystems**, 6(12), pp. 2471-2481, Nov. 2010, RCS Publishing.

25. Sara C. Madeira and Miguel C. Teixeira and Isabel Sá Correia and Arlindo L. Oliveira, Identification of Regulatory Modules in Time Series Gene Expression Data using a Linear Time Biclustering Algorithm, **IEEE Transactions on Computational Biology and Bioinformatics**, 7(1), pp. 153-165, Jan. 2010, IEEE/ACM.. IEEE/ACM.

26. Luís M. S. Russo and Gonzalo Navarro and Arlindo L. Oliveira and Pedro Morales, Approximate String Matching with Compressed Indexes, **Algorithms**, 2(3), pp. 1105-1136, Sep. 2009.

27. Joana P. Gonçalves and Sara C. Madeira and Arlindo L. Oliveira, BiGGEsTS: integrated environment for biclustering analysis of time series gene expression data, **BMC Research Notes**, 2(124), pp. , Jul. 2009, BioMed Central.

28. Miguel Bugalho and Arlindo L. Oliveira, Constant Time Clash Detection in Protein Folding, **Journal of Bioinformatics and Computational Biology**, 7(1), pp. 55-74, Feb. 2009, World Scientific.

29. Sara C. Madeira and Arlindo L. Oliveira, A polynomial time biclustering algorithm for finding approximate expression patterns in gene expression time series, **Algorithms for Molecular Biology**, 4(8), pp. , Jun. 2009, BioMed Central.

30. Ana C Casimiro, Susana Vinga, Ana T Freitas and Arlindo L Oliveira, An analysis of the positional distribution of DNA motifs in promoter regions and its biological relevance, BMC Bioinformatics, 9(89), Feb. 2008, **BMC Bioinformatics**, BioMed Central.

31. Luís M. S. Russo and Arlindo L. Oliveira, A Compressed Self-Index using a Ziv-Lempel Dictionary, **Information Retrieval**, 11(4), pp. 359-388, Aug. 2008. Springer.

32. Duarte Oliveira and Mauro Santos and Catarina Milheiriço and João Carriço and Susana Vinga and Arlindo L. Oliveira and Hermínia de Lencastre, ccrB Typing Tool: An online resource for staphylococci ccrB sequence, **Journal of Antimicrobial Chemotherapy**, 61(4):959-960, Jan. 2008.

33. André Martins and H. Sofia Pinto and Arlindo L. Oliveira, Using Grammatical Inference Techniques to Learn Ontologies that Describe the Structure of Domain Instances, 22(1/2), pp. 139-167, **Applied Artificial Intelligence**, Taylor & Francis.

34. Pedro Monteiro and Nuno Mendes and Miguel C. Teixeira and Sofia Orey and Sandra Tenreiro and Nuno Mira and Hélio Pais and Alexandre P. Francisco and Alexandra M. Carvalho and Artur Lourenço and Isabel Sá-Correia and Arlindo L. Oliveira and Ana T. Freitas, YEASTRACT-DISCOVERER: new tools to improve the analysis of transcriptional regulatory associations in Saccharomyces cerevisiae, **Nucleic Acids Research**, Jan. 2008, Oxford University Press.

35. Luís M. S. Russo and Arlindo L. Oliveira, Efficient generation of super condensed neighborhoods, **Journal of Discrete Algorithms**, 5(3), pp. 501-513, Sep. 2007, Elsevier.

36. Nuno Mendes and Ana Casimiro and Pedro M. Santos and Isabel Sá-Correia and Arlindo L. Oliveira and Ana T. Freitas, MUSA: a parameter free algorithm for the identification of biologically significant motifs, **Bioinformatics**, 22(24), pp. 2996-3002, Dec. 2006, Oxford Journals.

37. Alexandra M. Carvalho and Ana T. Freitas and Arlindo L. Oliveira and Marie-France Sagot, An Efficient Algorithm for the Identification of Structured Motifs in DNA Promoter Sequences, **IEEE/ACM Transactions on Computational Biology and Bioinformatics**, 3(2), pp. 126-140, Apr. 2006, IEEE.

38. Miguel C. Teixeira and Pedro Monteiro and Pooja Jain and Sandra Tenreiro and Alexandra R. Fernandes and Nuno P. Mira and Marta Alenquer and Ana T. Freitas and Arlindo L. Oliveira and Isabel Sá-Correia, The YEASTRACT database: a tool for the analysis of transcription regulatory associations in Saccharomyces cerevisiae, **Nucleic Acids Research**, 34(), pp. D446-D451, Jan. 2006, Oxford Journals.

39. Miguel Bugalho and Arlindo L. Oliveira, Inference of regular languages using state merging algorithms with search, **Pattern Recognition**, 38(9), pp. 1457-1467, Sep. 2005, Elsevier.

40. Sara C. Madeira and Arlindo L. Oliveira, Biclustering algorithms for biological data analysis: a survey, **IEEE/ACM Transactions on Computational Biology and Bioinformatics**, 1(1), pp. 24-45, Jan. 2004, IEEE/ACM.

41. Arlindo L. Oliveira and Rajeev Murgai, On the Problem of Gate Assignment Under Different Rise and Fall Delays, **IEEE Transactions on Computer Aided Design**, 22(11), pp. 807--814, Jun. 2003, IEEE.

42. J. Monteiro and Arlindo L. Oliveira, Implicit FSM Decomposition Applied To Low Power Design, **IEEE Transactions on Very Large Scale Integration Systems**, 10(5), pp. 560-565, Oct. 2002, IEEE.

43. Arlindo L. Oliveira, Techniques For The Creation Of Digital Watermarks In Sequential Circuit Designs, **IEEE Transactions on Computer Aided Design**, 20(9), pp. 1101-1117, Sep. 2001. IEEE.

44. Arlindo L. Oliveira and João Marques Silva, Efficient Algorithms For The Inference Of Minimum Size DFAs, Machine Learning, 44(1), pp. 93-119, Jul. 2001, Kluwer Academic Publishers. J. G. Pena and Arlindo L. Oliveira, A new algorithm for exact reduction of incompletely specified finite state machines, **IEEE Transactions on Computer Aided Design**, 18(11), pp. 1619--1632, Nov. 1999, IEEE.

45. Arlindo L. Oliveira and Luca Carloni and Tiziano Villa and Alberto Sangiovanni-Vincentelli, Exact

Minimization of Binary Decision Diagrams Using Implicit Techniques, **IEEE Transactions on Computers**, 47(11), pp. 1282-1296, Nov. 1998, IEEE.

46. Arlindo L. Oliveira and A. Sangiovanni-Vincentelli, Using the minimum description length principle to infer reduced ordered decision graphs, **Machine Learning**, 25(1), pp. 23--50, Jan. 1996, Kluwer.

Conference Papers and Book Chapters

1. Arlindo L. Oliveira, COVID-19 Contact Tracing Applications in Portugal: Effectiveness and Privacy Issues, in Towards Trustworthy Artificial Intelligent Systems, pp. 109-114, Springer, 2022
2. Manuel Goulão and Arlindo L. Oliveira, Pretraining the Vision Transformer using self-supervised methods for vision based Deep Reinforcement Learning, NeurIPS Deep Reinforcemente Learning Workshop, 2022
3. Ana Beatriz Vieira, Ana Catarina Fonseca, José Ferro and Arlindo Oliveira, Using a Siamese Network to Accurately Detect Ischemic Stroke in Computed Tomography Scans, 21st EPIA Conference on Artificial Intelligence, LNCS, 2022.
4. Tiago Oliveira and Arlindo Oliveira, Assessing Policy, Loss and Planning Combinations in Reinforcement Learning using a New Modular Architecture, 21st EPIA Conference on Artificial Intelligence, LNCS, 2022.
5. Rafael Pedro, Arlindo L. Oliveira , Assessing the Impact of Attention and Self-Attention Mechanisms on the Classification of Skin Lesions, International Joint Conference on Neural Networks, 2022.
6. João Lourenço-Silva, Arlindo L. Oliveira, Using Soft Labels to Model Uncertainty in Medical Image Segmentation, International MICCAI Brainlesion Workshop, 585-596, LNCS, 2022.
7. João Lourenço-Silva, Miguel Nobre Menezes, Tiago Rodrigues, Beatriz Silva, Fausto J. Pinto and Arlindo L. Oliveira. Encoder-Decoder Architectures for Clinically Relevant Coronary Artery Segmentation, 11th International Conference on Computational Advances in Bio and Medical Sciences, Springer LNCS, 2021.
8. Arlindo L. Oliveira, Artificial Intelligence Applications in Stroke, in Precision Medicine in Stroke, Springer, 2021.
9. Alexandre Borges, Arlindo L. Oliveira, Combining Off and On-Policy Training in Model-Based Reinforcement Learning, Adaptive and Learning Agents AAMAS workshop, 2021.
10. João Rico, José Barateiro, Arlindo L. Oliveira, Graph Neural Networks for Traffic Forecasting, presented at 17th International Operations and Maintenance Conference in the Arab Countries (OIMANTEC) 2019.
11. Miguel Monteiro, Mário A. T. Figueiredo, Arlindo L. Oliveira, Conditional Random Fields as Recurrent Neural Networks for 3D Medical Imaging Segmentation, Medical Imaging meets NeurIPS Workshop, Dec. 2018
12. Miguel Monteiro, Arlindo L. Oliveira, Fully Convolutional Neural Network for 3D Stroke Lesion Segmentation, presented at Ischemic Stroke Lesion Segmentation Challenge (ISLES), International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI) 2017.
13. André Veríssimo, Eunice Carrasquinha, Marta Lopes, Arlindo L. Oliveira, Marie-France Sagot, Susana Vinga, Network-based sparse modeling of breast invasive carcinoma survival data, presented at Signal Processing with Adaptive Sparse Structured Representations (SPARS) 2017.
14. Miguel Monteiro, Ana C. Fonseca, Ana T. Freitas, Teresa P. Melo, Alexandre P. Francisco, José M. Ferro, Improving the Prediction of Functional Outcome in Ischemic Stroke Patients, presented at the International Workshop on Data Mining in Bioinformatics (BIOKDD) 2017.
15. André Veríssimo, Eunice Carrasquinha, Marta Lopes, Arlindo L. Oliveira, Marie-France Sagot, Susana Vinga, Random Sample Consensus (RANSAC) for the robust identification of outliers in transcriptomic data, ISMB/ECCB 2017.
16. André Veríssimo, Arlindo L. Oliveira, Susana Vinga, DegreeCox: a network-based regularization method for survival analysis, Tenth International Workshop on Machine Learning in Systems Biology (MLSB) 2016.
17. Nelson Silveira, Thiago Elias, Susana Vinga, Arlindo L. Oliveira, Selection of biomarkers and drug target in HNSCC based on meta and structural analysis, SolBio International Conference and Computational Biology for Innovative Genomics (SoiBIO) 2016.
18. André Leitão, A. P. Francisco, Arlindo L. Oliveira, Rodolfo Abreu, Sandro Nunes, Juliana Rodrigues, Patrícia Figueiredo, Lawrence L. Wald, Marta Bianciardi and L. Miguel Silveira, Voxel-Based Analysis of Functional Connectivity Networks from Ultra-High Resolution fMRI, Organization for Human Brain Mapping Annual Conference, Jun. 2015
19. Francisco Fernandes, Paulo Fonseca, Luís M. S. Russo, Arlindo L. Oliveira and Ana T. Freitas, An efficient data representation for large scale genome re-sequencing, presented at 13tth International Meeting on Human Genome Variation and Complex Genome Analysis (HGV2012), Sep. 2012
20. Luís M. S. Russo, Ana T. Freitas and Arlindo L. Oliveira, Transparent Hidden Markov Models, presented at the Learning Workshop, Mar. 2012.
21. Francisco Fernandes, Paulo Fonseca, Luís M. S. Russo, Arlindo L. Oliveira and Ana T. Freitas, TAPYR: An efficient high-throughput sequence aligner for re-sequencing applications, presented at 7th

International Conference of the Brazilian Association for Bioinformatics and Computational Biology, Oct. 2011.

22. Paulo J. Dias, Pedro T. Monteiro, Arlindo L. Oliveira, Ana T. Freitas, Isabel Sá-Correia and Miguel C. Teixeira, Insights into the transcription regulatory network controlling the multidrug resistance gene FLR1: a systems biology approach, presented at 25th International Conference on Yeast Genetics and Molecular biology, Jul. 2011.

23. Dulce Calçada, Susana Vinga, Ana T. Freitas and Arlindo L. Oliveira, Quantitative modeling the Saccharomyces cerevisiae FLR1 Regulatory Network using an S-System Formalism, presented at IEEE International Conference on Healthcare Informatics, Imaging and Systems Biology, Jul. 2011.

24. Alexandre P. Francisco, Sophie Schbath, Ana T. Freitas and Arlindo L. Oliveira, Using Graph Modularity Analysis to Identify Transcription Factor Binding Sites, presented at International Workshop on Graph Theoretic Analysis of Biological Networks at the IEEE International Conference on Bioinformatics and Biomedicine (BIBM10), Dec. 2010.

25. Alexandre P. Francisco, Arlindo L. Oliveira, Fully generalized graph cores, presented at Complex Networks, Oct. 2010.

26. Alexandre P. Francisco, Ricardo Baeza-Yates and Arlindo L. Oliveira, Mining large query induced graphs towards a hierarchical query folksonomy, presented at String Processing and Information Retrieval (SPIRE), Oct. 2010.

27. Alexandre and Arlindo L. Oliveira, On community detection in very large networks, presented at Complex Networks, Oct. 2010 [bibTex]

28. Paulo Trezentos, Inês Lynce and Arlindo L. Oliveira, Apt-pbo: Solving the Software Dependency Problem using Pseudo-Boolean Optimization, presented at 25th IEEE/ACM International Conference on Automated Software Engineering, Sep. 2010.

29. Pedro T. Monteiro, Paulo J. Dias, Delphine Ropers, Arlindo L. Oliveira, Isabel Sá-Correia, Miguel C. Teixeira and Ana T. Freitas, Computational Modeling and Analysis of the Yeast FLR1 Regulatory Network in Mancozeb-challenged Cells, presented at Eleven International Conference on Systems Biology, Sep. 2010.

30. Alexandre P. Francisco, Arlindo L. Oliveira and Ana T. Freitas, A graph based approach to motif clustering, presented at Fourteenth International Conference on Research in Computational Molecular Biology (RECOMB), Aug. 2010.

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32. Ana Sofia Graça, Inês Lynce, João Marques Silva and Arlindo L. Oliveira, Efficient and Accurate Haplotype Inference by Combining Parsimony and Pedigree Information, presented at Algebraic and Numeric Biology (ANB10), Aug. 2010.

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Pre-prints and reports
1. Gonçalo Mestre, Ruxandra Barbulescu, Arlindo L Oliveira, L Miguel Silveira, Modelling Neuronal Behaviour with Time Series Regression: Recurrent Neural Networks on C. Elegans Data, arXiv preprint arXiv:2107.06762
2. Dinis L Rodrigues, Miguel Nobre Menezes, Fausto J Pinto, Arlindo L Oliveira, Automated Detection of Coronary Artery Stenosis in X-ray Angiography using Deep Neural Networks, arXiv preprint arXiv:2103.02969

Research Grants

2022 -- 2025	Center for Responsible Artificial Intelligence, funded by PRR (78M€), coordinator of the participation of IST and participant though INESC-ID
2021 -- 2024	PRELUNA: Precise and Efficient Learning using Attention Mechanisms, funded by FCT (249K€)
2020 -- 2020	INTAKE: INtegrating mobility daTa into spAtial risK modEls, funded by FCT (38K €)
2015 -- 2019	ELIXIR-EXCELERATE: fast-track ELIXIR implementation and drive early user exploitation, funded by the European Commission (20M €) across the life sciences.
	Biodata, Portuguese Biological Data Network, funded by FCT (2M €)
2019 -- 2021	iLU: Integrative Learning from Urban Data, funded by FCT (299K €)
2018 -- 2021	Algorithms for Model Reduction and Efficient Simulation of realistic neuronal networks, funded by FCT (238K €)
2016 -- 2020	PRECISE: Accelerating progress toward the new era of precision medicine, funded by FCT (2500K €)
2013 -- 2015	HIFI-MRI: Whole Brain Functional Connectivity Analysis of Ultra-High Field fMRI, funded by FCT (127K €)
2012 -- 2014	NetDyn: Understanding real large networks, from structure to dynamics, funded by FCT (75K €)
2021 -- 2014	NEUROCLINOMICS - Understanding NEUROdegenerative diseases throught CLINical and OMICS data integration, funded by FCT (130K €)
2011 -- 2013	TAGS, The power of the short - Tools and Algorithms for next Generation Sequencing applications, funded by FCT (100K €)
2011 -- 2013	HELIX, Heterogeneous Multi-Core Architecture for Biological Sequence AnalysIs, funded by FCT (120K €)
2007 -- 2009	DYABLO, Models for the Dynamic Behavior of Biological Networks, funded by FCT (120K €)
2007 -- 2009	ARN, Algorithms for the identification of genetic Regulatory Networks, funded by FCT (120K €) (principal investigator: Ana Teresa Freitas)
2005 -- 2007	DBYeast: A Framework for the development and application of algorithms to the

	analysis and identification of gene regulatory networks, funded by FCT (90K €)
2007 -- 2009	SHIPs: SAT-based haplotype inference by pure parsimony, funded by FCT (92K €) (principal investigator: Inês Lynce)
1995 -- 2007	Cadence Labs: Machine Learning and Data Mining Techniques in CAD, 1995-2007, funded by Cadence Design Systems (1.1M USD)
2004 -- 2007	BioGrid - Parallel Algorithms for Gene Annotation, funded by FCT (134K €)
2005 -- 2007	Insights into the complex regulatory networks acting in yeast cells changed with drugs/chemical stresses: genome wide expressions approaches supported by bioinformatics, funded by FCT (40K €) (principal investigator: Isabel Sá-Correia)
1999 -- 2000	PCBIT - Low-Power ISDN Interface for Portable PCs, funded by the EC (90K €)
1999 -- 2002	TGV - Techniques for Global Functional Verification of Complex Digital Systems, funded by FCT (120K €)
1999 -- 2001	COOLCHIPS: An Environment for the Design and Analysis of Power Efficient Systems, funded by FCT (97K €) (principal investigator: José Monteiro)
1999 -- 2001	LowPower - Design techniques for low power circuits, funded by FCT (90K €)

Professional Certification and Awards

- Distinguished professor of Instituto Superior Técnico, awarded in 2020.
- Municipal Medal of Merit, granted by the Loures Municipality, for scientific and technical contributions, in 2017.
- Prize Barca Aldegalega, granted by the Montijo Municipality, for contributions to society, in 2016.
- UTL/Santander Prize for Excellence in Research in 2009.
- Prize Sartorius for Innovation in Biotechnology, at Micro-Biotec 2007, for the work that lead to the Yeastract information system and the article YEASTRACT-DISCOVERER: new tools to improve the analysis of transcriptional regulatory associations in Saccharomyces cerevisiae published in NAR. in 2008 (with a number of co-authors, see publication list).
- Best paper award for the 2001 ICECS article Circuit partitioning techniques for power estimation using the full set of input correlations (with Ana Teresa Freitas).
- Fulbright fellowship to pursue PhD studies at the University of California, Berkeley in 1989.
- Best student in Electrical Engineering and Computer Science, granted by the Portuguese chapter of IEEE, in 1986

Professional Society Membership

Senior Member of the Institute for Electrical and Electronics Engineers (IEEE)
Member of the Association for Computing Machinery (ACM)
Member of the Portuguese Academy of Engineering
Member of Ordem dos Engenheiros
Member of the International Advisory Board (IAB) of the European Parliament Science and Technology Options Assessment (STOA) Panel
Member of the National Council for Science, Technology and Innovation (CNCTI)
Member of the Risks Committee of Caixa Geral de Depositos (CDG)
Chair of the Nomination and Remuneration Committee of Caixa Geral de Depositos (CGD)
Member of the General Council of the Portuguese Association for the Development of Information Systems - (APDSI)
Member of the Strategic Council for Innovation of Vieira de Almeida, Sociedade de Advogados
Member of the Advisory Board of the Portuguese Association for Artificial Intelligence (APPIA)
Member of the Strategic Council for Digital Economy of Confederacao Empresarial de Portugal (CIP)
Member of the Lisbon Regional Innovation Council (CRI) of CCDR-LVT
Member of the Strategic Advisory Board of the Armilar Technology Transfer Fund
Member of the Nomination and Remuneration Committee of Caixa Geral de Depositos (CGD)
Member of the Advisory Board of Indico Capital Partners
Member of the Digital Advisory Board of Caixa Geral de Depositos (CGD)
Member of the Scientific Council of Taguspark S.A.
Member of the Consulting Council of Agencia Nacional de Inovacao (ANI)
Member of the Board of Directors of Taguspark S.A.
Member of the Board of Directors of Associacao para o Desenvolvimento do Centro Academico de Medicina de Lisboa (ADCAML)
Member of the Strategic Council for Digital Economy of Confederacao Empresarial de Portugal (CIP)
President of Associacao do Instituto Superior Tecnico para a Investigacao e Desenvolvimento (IST-ID)
President of Associacao para o Desenvolvimento do Instituto Superior Tecnico (ADIST)
Member of the Advisory Board of Heartgenetics S.A.