

# Heitor SilvÃ©rio Lopes

## List of Publications by Year in descending order

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Version: 2024-02-01

138  
papers

2,763  
citations

393982

19  
h-index

223531

46  
g-index

146  
all docs

146  
docs citations

146  
times ranked

1997  
citing authors

#	ARTICLE	IF	CITATIONS
1	Data mining with an ant colony optimization algorithm. IEEE Transactions on Evolutionary Computation, 2002, 6, 321-332.	7.5	785
2	New inspirations in swarm intelligence: a survey. International Journal of Bio-Inspired Computation, 2011, 3, 1.	0.6	341
3	A study of deep convolutional auto-encoders for anomaly detection in videos. Pattern Recognition Letters, 2018, 105, 13-22.	2.6	200
4	Genetic programming for knowledge discovery in chest-pain diagnosis. IEEE Engineering in Medicine and Biology Magazine, 2000, 19, 38-44.	1.1	95
5	A constrained-syntax genetic programming system for discovering classification rules: application to medical data sets. Artificial Intelligence in Medicine, 2004, 30, 27-48.	3.8	95
6	Discovering comprehensible classification rules with a genetic algorithm. , 0, , .		91
7	A Survey of Swarm Algorithms Applied to Discrete Optimization Problems. , 2013, , 169-191.		86
8	Particle Swarm Optimization for the Multidimensional Knapsack Problem. Lecture Notes in Computer Science, 2007, , 358-365.	1.0	43
9	An Artificial Immune System for Fuzzy-Rule Induction in Data Mining. Lecture Notes in Computer Science, 2004, , 1011-1020.	1.0	41
10	Extracting human attributes using a convolutional neural network approach. Pattern Recognition Letters, 2015, 68, 250-259.	2.6	41
11	An integer programming model for protein structure prediction using the 3D-HP side chain model. Discrete Applied Mathematics, 2016, 198, 206-214.	0.5	40
12	Evolutionary Algorithms for the Protein Folding Problem: A Review and Current Trends. Studies in Computational Intelligence, 2008, , 297-315.	0.7	39
13	An object detection and recognition system for weld bead extraction from digital radiographs. Computer Vision and Image Understanding, 2006, 102, 238-249.	3.0	31
14	Neural networks for protein classification. Applied Bioinformatics, 2004, 3, 41-48.	1.7	29
15	A new approach for template matching in digital images using an Artificial Bee Colony Algorithm. , 2009, , .		27
16	Self-Adapting Evolutionary Parameters: Encoding Aspects for Combinatorial Optimization Problems. Lecture Notes in Computer Science, 2005, , 154-165.	1.0	25
17	GEPCLASS: A Classification Rule Discovery Tool Using Gene Expression Programming. Lecture Notes in Computer Science, 2006, , 871-880.	1.0	24
18	A comparison of swarm intelligence algorithms for structural engineering optimization. International Journal for Numerical Methods in Engineering, 2012, 91, 666-684.	1.5	23

#	ARTICLE	IF	CITATIONS
19	Supply chain optimisation using evolutionary algorithms. International Journal of Computer Applications in Technology, 2008, 31, 158.	0.3	22
20	A differential evolution approach for protein structure optimisation using a 2D off-lattice model. International Journal of Bio-Inspired Computation, 2010, 2, 242.	0.6	21
21	Parallel Approaches for the Artificial Bee Colony Algorithm. Adaptation, Learning, and Optimization, 2011, , 329-345.	0.5	21
22	Genetic programming for epileptic pattern recognition in electroencephalographic signals. Applied Soft Computing Journal, 2007, 7, 343-352.	4.1	20
23	A Differential Evolution Approach for Protein Folding Using a Lattice Model. Journal of Computer Science and Technology, 2007, 22, 904-908.	0.9	20
24	An eco-inspired evolutionary algorithm applied to numerical optimization. , 2011, , .		20
25	Burnout and occupational stress in the medical residents of Oncology, Haematology and Radiotherapy: a prevalence and predictors study in Portugal. Psychology, Health and Medicine, 2018, 23, 317-324.	1.3	20
26	Parallel Artificial Bee Colony Algorithm Approaches for Protein Structure Prediction Using the 3DHP-SC Model. Studies in Computational Intelligence, 2010, , 255-264.	0.7	19
27	An Improved Artificial Bee Colony Algorithm for the Object Recognition Problem in Complex Digital Images Using Template Matching. International Journal of Natural Computing Research, 2010, 1, 54-70.	0.5	15
28	A Comparison of Differential Evolution Algorithm with Binary and Continuous Encoding for the MKP. , 2013, , .		14
29	A hybrid particle swarm optimization model for the traveling salesman problem. , 2005, , 255-258.		13
30	A CONFIGWARE APPROACH FOR HIGH-SPEED PARALLEL ANALYSIS OF GENOMIC DATA. Journal of Circuits, Systems and Computers, 2007, 16, 527-540.	1.0	13
31	Protein structure prediction with the 3D-HP side-chain model using a master-slave parallel genetic algorithm. Journal of the Brazilian Computer Society, 2010, 16, 69-78.	0.8	13
32	Hierarchical Parallel Genetic Algorithm applied to the three-dimensional HP Side-chain Protein Folding Problem. , 2010, , .		13
33	Discrete Capacity Assignment in IP networks using Particle Swarm Optimization. Applied Mathematics and Computation, 2011, 217, 5338-5346.	1.4	13
34	Population-based harmony search using GPU applied to protein structure prediction. International Journal of Computational Science and Engineering, 2014, 9, 106.	0.4	13
35	An improved parallel differential evolution approach for protein structure prediction using both 2D and 3D off-lattice models. , 2013, , .		12
36	A Heuristic Algorithm Based on Ant Colony Optimization for Multi-objective Routing in Vehicle Ad Hoc Networks. , 2013, , .		12

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37	A computational ecosystem for optimization: review and perspectives for future research. Memetic Computing, 2015, 7, 29-41.	2.7	12
38	A clustering-based deep autoencoder for one-class image classification. , 2017, , .		12
39	A Differential Evolution Approach for Protein Folding. , 2006, , .		11
40	A distributed approach for a multiple sequence alignment algorithm using a parallel virtual machine. , 2005, 2005, 2843-6.		10
41	Classification of Weeds and Crops at the Pixel-Level Using Convolutional Neural Networks and Data Augmentation. , 2019, , .		10
42	One-Class Classification in Images and Videos Using a Convolutional Autoencoder With Compact Embedding. IEEE Access, 2020, 8, 86520-86535.	2.6	10
43	Deep metric learning for open-set human action recognition in videos. Neural Computing and Applications, 2021, 33, 1207-1220.	3.2	10
44	Particle Swarm Optimization for Object Recognition in Computer Vision. Lecture Notes in Computer Science, 2008, , 11-21.	1.0	10
45	Detection of epileptic events using genetic programming. , 0, , .		9
46	A comparison of FPGA and FPAAs technologies for a signal processing application. , 2009, , .		9
47	Parallelism, hybridism and coevolution in a multi-level ABC-GA approach for the protein structure prediction problem. Concurrency Computation Practice and Experience, 2012, 24, 635-646.	1.4	9
48	EPYNET: Efficient Pyramidal Network for Clothing Segmentation. IEEE Access, 2020, 8, 187882-187892.	2.6	9
49	A Heterogeneous Parallel Ecologically-Inspired Approach Applied to the 3D-AB Off-Lattice Protein Structure Prediction Problem. , 2013, , .		8
50	A Hybrid Genetic Algorithm for the Protein Folding Problem Using the 2D-HP Lattice Model. Studies in Computational Intelligence, 2008, , 121-140.	0.7	8
51	Using a chain of LVQ neural networks for pattern recognition of EEG signals related to intermittent photic-stimulation. , 0, , .		7
52	A Comparative Study of Machine Learning Methods for Detecting Promoters in Bacterial DNA Sequences. Lecture Notes in Computer Science, 2008, , 959-966.	1.0	7
53	A parallel genetic algorithm for protein folding prediction using the 3D-HP Side Chain model. , 2009, , .		7
54	Design of a complex bioimpedance spectrometer using DFT and undersampling for neural networks diagnostics. Medical Engineering and Physics, 2011, 33, 356-361.	0.8	7

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55	A deep bidirectional long short-term memory approach applied to the protein secondary structure prediction problem. , 2017, , .		7
56	Reconfigurable Computing for Accelerating Protein Folding Simulations. , 2007, , 314-325.		7
57	Bioluminescent Swarm Optimization Algorithm. , 0, , .		7
58	Detection of movement-related desynchronization of the EEG using neural networks. , 0, , .		6
59	Construction and improvement heuristics applied to the capacitated vehicle routing problem. , 2009, , .		6
60	A study of topology in insular Parallel Genetic Algorithms. , 2009, , .		6
61	TEMPLATE MATCHING IN DIGITAL IMAGES USING A COMPACT GENETIC ALGORITHM WITH ELITISM AND MUTATION. Journal of Circuits, Systems and Computers, 2010, 19, 91-106.	1.0	6
62	PRADA: a high-performance reconfigurable parallel architecture based on the dataflow model. International Journal of High Performance Systems Architecture, 2011, 3, 41.	0.2	6
63	Biological plausibility in optimisation: an ecosystemic view. International Journal of Bio-Inspired Computation, 2012, 4, 345.	0.6	6
64	An Innovative Application of a Constrained-Syntax Genetic Programming System to the Problem of Predicting Survival of Patients. Lecture Notes in Computer Science, 2003, , 11-21.	1.0	6
65	Genetic Algorithms for the Assembly Line Balancing Problem: A Real-World Automotive Application. , 2002, , 319-327.		6
66	Implementation of a Parallel Algorithm for Protein Pairwise Alignment Using Reconfigurable Computing. , 2006, , .		5
67	Genetic algorithm for type-2 assembly line balancing. , 2015, , .		5
68	Fault Classification in Power Distribution Systems using PMU Data and Machine Learning. , 2019, , .		5
69	Object Detection for Computer Vision Using a Robust Genetic Algorithm. Lecture Notes in Computer Science, 2005, , 284-293.	1.0	4
70	Supply Chain Optimization Using Chaotic Differential Evolution Method. , 2006, , .		4
71	Automatic motif discovery in an enzyme database using a genetic algorithm-based approach. Soft Computing, 2006, 10, 325-330.	2.1	4
72	Data mining with a parallel rule induction system based on gene expression programming. International Journal of Innovative Computing and Applications, 2011, 3, 136.	0.2	4

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73	Solving the base station placement problem by means of swarm intelligence. , 2013, , .		4
74	An Ecology-Based Evolutionary Algorithm Applied to the 2D-AB Off-Lattice Protein Structure Prediction Problem. , 2013, , .		4
75	Multiple Face Recognition Using Local Features and Swarm Intelligence. IEICE Transactions on Information and Systems, 2014, E97.D, 1614-1623.	0.4	4
76	A Comparative Study of Transfer Learning Approaches for Video Anomaly Detection. International Journal of Pattern Recognition and Artificial Intelligence, 2021, 35, 2152003.	0.7	4
77	An Improved ABC Algorithm Approach Using SURF for Face Identification. Lecture Notes in Computer Science, 2012, , 143-150.	1.0	4
78	A genetic approach to ARMA filter synthesis for EEG signal simulation. , 0, , .		3
79	Automatic FIR Filter Design Method and Tool based on Genetic Algorithms. , 2007, , .		3
80	Modeling and Building an Ontology for Neuropediatric Physiotherapy Domain. , 2008, , .		3
81	Evaluation of dynamic behavior forecasting parameters in the process of transition rule induction of unidimensional cellular automata. BioSystems, 2010, 99, 6-16.	0.9	3
82	Differential evolution variants and MILP for the pipeline network schedule optimization problem. , 2015, , .		3
83	An Ecologically-inspired Parallel Approach Applied to the Protein Structure Reconstruction from Contact Maps. , 2016, , .		3
84	OSVidCap: A Framework for the Simultaneous Recognition and Description of Concurrent Actions in Videos in an Open-Set Scenario. IEEE Access, 2021, 9, 137029-137041.	2.6	3
85	Gene Expression Programming for Evolving Two-Dimensional Cellular Automata in a Distributed Environment. Studies in Computational Intelligence, 2015, , 107-117.	0.7	3
86	Reconfigurable Parallel Architecture for Genetic Algorithms: Application to the Synthesis of Digital Circuits. , 2007, , 326-336.		3
87	Molecular Dynamics for Simulating the Protein Folding Process Using the 3D AB Off-Lattice Model. Lecture Notes in Computer Science, 2012, , 61-72.	1.0	3
88	A Graph-Based Genetic Algorithm for the Multiple Sequence Alignment Problem. Lecture Notes in Computer Science, 2006, , 420-429.	1.0	3
89	Reconfigurable Hardware Computing for Accelerating Protein Folding Simulations Using the Harmony Search Algorithm and the 3D-HP-Side Chain Model. Lecture Notes in Computer Science, 2011, , 363-374.	1.0	3
90	A Dose-Response Model for the Conventional Phototherapy of the Newborn. Journal of Clinical Monitoring and Computing, 2006, 20, 159-164.	0.7	2

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91	Genetic Programming with Incremental Learning for Grammatical Inference. , 2006, , .		2
92	Genetic Programming for Induction of Context-Free Grammars. , 2007, , .		2
93	Evaluation of Weight Matrix Models in the splice junction recognition problem. , 2009, , .		2
94	A FPGA-BASED RECONFIGURABLE PARALLEL ARCHITECTURE FOR HIGH-PERFORMANCE NUMERICAL COMPUTATION. Journal of Circuits, Systems and Computers, 2011, 20, 849-865.	1.0	2
95	Using Social Network Analysis to Unveil Cartels in Public Bids. , 2014, , .		2
96	Evolutionary computation and swarm intelligence for the inference of gene regulatory networks. International Journal of Innovative Computing and Applications, 2016, 7, 225.	0.2	2
97	PathMold-AB: Spatiotemporal pathways of protein folding using parallel molecular dynamics with a coarse-grained model. Computational Biology and Chemistry, 2020, 87, 107301.	1.1	2
98	Incremental human action recognition with dual memory. Image and Vision Computing, 2021, 116, 104313.	2.7	2
99	Simulation of the Dynamic Behavior of One-Dimensional Cellular Automata Using Reconfigurable Computing. , 2007, , 385-390.		2
100	A New Mutation Operator for the Elitism-Based Compact Genetic Algorithm. Lecture Notes in Computer Science, 2007, , 159-166.	1.0	2
101	Ab-Initio Protein Folding Using Molecular Dynamics and a Simplified Off-Lattice Model. Journal of Bionanoscience, 2013, 7, 391-402.	0.4	2
102	An Evolutionary Approach for Motif Discovery and Transmembrane Protein Classification. Lecture Notes in Computer Science, 2005, , 105-114.	1.0	2
103	Computers in Physical Therapy Education: Interactive Multimedia Learning with MuStreT. Informatics in Education, 2009, 8, 157-172.	1.8	2
104	A Comparative Study for Open Set Semantic Segmentation Methods. , 0, , .		2
105	Soft Biometrics Classification in Videos Using Transfer Learning and Bidirectional Long Short-Term Memory Networks. Learning and Nonlinear Models, 2020, 18, 47-59.	0.2	2
106	Phototherapy of the Newborn: a Predictive Model for the Outcome. , 2005, 2005, 6725-8.		1
107	Preliminary Steps Towards Protein Folding Prediction Using Reconfigurable Computing. , 2006, , .		1
108	An Electric Energy Quality Meter Using Hardware Reconfigurable Computing. , 2006, , .		1

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109	MAHATMA: A Genetic Programming-Based Tool for Protein Classification. , 2009, , .		1
110	A Molecular Model for Representing Protein Structures and Its Application to Protein Folding. International Conference on Bioinformatics and Biomedical Engineering: [proceedings] International Conference on Bioinformatics and Biomedical Engineering, 2010, , .	0.0	1
111	A genetic programming method for protein motif discovery and protein classification. Soft Computing, 2011, 15, 1897-1908.	2.1	1
112	Multi-class classification of objects in images using principal component analysis and genetic programming. , 2015, , .		1
113	A discretized differential evolution algorithm for the inference of Gene Regulatory Networks. , 2015, , .		1
114	A Novel Approach to Protein Folding Prediction based on Long Short-Term Memory Networks: A Preliminary Investigation and Analysis. , 2018, , .		1
115	A benchmark of optimally folded protein structures using integer programming and the 3D-HP-SC model. Computational Biology and Chemistry, 2020, 84, 107192.	1.1	1
116	A Study of the Influence of Data Complexity and Similarity on Soft Biometrics Classification Performance in a Transfer Learning Scenario. Learning and Nonlinear Models, 2021, 18, 56-65.	0.2	1
117	Multiple Sequence Alignment Using Reconfigurable Computing. , 2007, , 379-384.		1
118	Qualitative analysis of deep learning frameworks. Learning and Nonlinear Models, 2017, 15, 45-52.	0.2	1
119	Mining Comprehensible Rules from Data with an Ant Colony Algorithm. Lecture Notes in Computer Science, 2002, , 259-269.	1.0	1
120	A Compact Genetic Algorithm with Elitism and Mutation Applied to Image Recognition. Lecture Notes in Computer Science, 2008, , 1109-1116.	1.0	1
121	Population Resizing Using Nonlinear Dynamics in an Ecology-Based Approach. Lecture Notes in Computer Science, 2012, , 27-34.	1.0	1
122	Mobile computing on telemedicine and distance learning: application on surgery pediatric oncology. , 0, , .		0
123	Hardalign: a parallel pairwise alignment hardware application. , 2006, , .		0
124	A new greedy heuristic for 3DHP protein struture prediction with side chain. , 2012, , .		0
125	A fast modular simulator for combinational logic circuits generated by genetic algorithm. , 2013, , .		0
126	An efficient method to determine strain profiles on FBGs by using differential evolution and GPU. , 2015, , .		0



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127	A high performance approach for parallel computing of fibre Bragg grating strain profiles using graphics processing units. International Journal of High Performance Systems Architecture, 2016, 6, 197.	0.2	0
128	Evolutionary computation methods for the schedule optimisation of pipeline networks. International Journal of Innovative Computing and Applications, 2016, 7, 191.	0.2	0
129	A gene expression programming approach for evolving multi-class image classifiers. , 2017, , .		0
130	A Framework for Analyzing Book Covers and Co-purchases using Object Detection and Data Mining Methods. , 2019, , .		0
131	Genetic Algorithms and Heuristic Rules for Solving the Nesting Problem in the Package Industry. Lecture Notes in Electrical Engineering, 2008, , 189-207.	0.3	0
132	Template Matching in Digital Images with Swarm Intelligence. , 2015, , 6041-6049.		0
133	Wi-Fi Device Identification in Crowd Counting Using Machine Learning Methods. Learning and Nonlinear Models, 2017, 15, 53-63.	0.2	0
134	A Study on the Perception of Researchers About the Application of Agile Software Development Methods in Research. Communications in Computer and Information Science, 2018, , 137-145.	0.4	0
135	Análise da fragmentação partidária na Assembleia Legislativa do Rio Grande do Sul com Métodos de Mineração de Dados. , 0, , .		0
136	A Transfer Learning Approach for the Tattoo Detection Problem. , 0, , .		0
137	Explainable Anomaly Detection in Videos Based on the Description of Atomic Actions. , 0, , .		0
138	Deep Learning for People Counting in Videos by Age and Gender. , 0, , .		0