# Heitor SilvÃ©rio Lopes

## List of Publications by Year
in descending order

| | |
|---|---|
| 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 | Deep metric learning for open-set human action recognition in videos. Neural Computing and Applications, 2021, 33, 1207-1220. | 3.2 | 10 |
| 2 | 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 |
| 3 | 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 |
| 4 | 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 |
| 5 | Incremental human action recognition with dual memory. Image and Vision Computing, 2021, 116, 104313. | 2.7 | 2 |
| 6 | 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 |
| 7 | EPYNET: Efficient Pyramidal Network for Clothing Segmentation. IEEE Access, 2020, 8, 187882-187892. | 2.6 | 9 |
| 8 | One-Class Classification in Images and Videos Using a Convolutional Autoencoder With Compact Embedding. IEEE Access, 2020, 8, 86520-86535. | 2.6 | 10 |
| 9 | 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 |
| 10 | Soft Biometrics Classication in Videos Using Transfer Learning and Bidirectional Long Short-Term Memory Networks. Learning and Nonlinear Models, 2020, 18, 47-59. | 0.2 | 2 |
| 11 | A Framework for Analyzing Book Covers and Co-purchases using Object Detection and Data Mining Methods. , 2019, , . |  | 0 |
| 12 | Fault Classification in Power Distribution Systems using PMU Data and Machine Learning. , 2019, , . |  | 5 |
| 13 | Classification of Weeds and Crops at the Pixel-Level Using Convolutional Neural Networks and Data Augmentation. , 2019, , . |  | 10 |
| 14 | 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 |
| 15 | A study of deep convolutional auto-encoders for anomaly detection in videos. Pattern Recognition Letters, 2018, 105, 13-22. | 2.6 | 200 |
| 16 | A Novel Approach to Protein Folding Prediction based on Long Short-Term Memory Networks: A Preliminary Investigation and Analysis. , 2018, , . |  | 1 |
| 17 | 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 |
| 18 | A gene expression programming approach for evolving multi-class image classifiers. , 2017, , . |  | 0 |

| # | Article | IF | Citations |
|---|---------|-----|-----------|
| 19 | A clustering-based deep autoencoder for one-class image classification. , 2017, , . | | 12 |
| 20 | A deep bidirectional long short-term memory approach applied to the protein secondary structure prediction problem. , 2017, , . | | 7 |
| 21 | Qualitative analysis of deep learning frameworks. Learning and Nonlinear Models, 2017, 15, 45-52. | 0.2 | 1 |
| 22 | Wi-Fi Device Identification in Crowd Counting Using Machine Learning Methods. Learning and Nonlinear Models, 2017, 15, 53-63. | 0.2 | 0 |
| 23 | 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 |
| 24 | Evolutionary computation methods for the schedule optimisation of pipeline networks. International Journal of Innovative Computing and Applications, 2016, 7, 191. | 0.2 | 0 |
| 25 | 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 |
| 26 | An Ecologically-inspired Parallel Approach Applied to the Protein Structure Reconstruction from Contact Maps. , 2016, , . | | 3 |
| 27 | 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 |
| 28 | Multi-class classification of objects in images using principal component analysis and genetic programming. , 2015, , . | | 1 |
| 29 | Differential evolution variants and MILP for the pipeline network schedule optimization problem. , 2015, , . | | 3 |
| 30 | An efficient method to determine strain profiles on FBGs by using differential evolution and GPU. , 2015, , . | | 0 |
| 31 | Genetic algorithm for type-2 assembly line balancing. , 2015, , . | | 5 |
| 32 | A discretized differential evolution algorithm for the inference of Gene Regulatory Networks. , 2015, , . | | 1 |
| 33 | A computational ecosystem for optimization: review and perspectives for future research. Memetic Computing, 2015, 7, 29-41. | 2.7 | 12 |
| 34 | Extracting human attributes using a convolutional neural network approach. Pattern Recognition Letters, 2015, 68, 250-259. | 2.6 | 41 |
| 35 | Gene Expression Programming for Evolving Two-Dimensional Cellular Automata in a Distributed Environment. Studies in Computational Intelligence, 2015, , 107-117. | 0.7 | 3 |
| 36 | Template Matching in Digital Images with Swarm Intelligence. , 2015, , 6041-6049. | | 0 |

| # | Article | IF | Citations |
|---|---|---|---|
| 37 | Population-based harmony search using GPU applied to protein structure prediction. International Journal of Computational Science and Engineering, 2014, 9, 106. | 0.4 | 13 |
| 38 | Using Social Network Analysis to Unveil Cartels in Public Bids. , 2014, , . | | 2 |
| 39 | Multiple Face Recognition Using Local Features and Swarm Intelligence. IEICE Transactions on Information and Systems, 2014, E97.D, 1614-1623. | 0.4 | 4 |
| 40 | A Comparison of Differential Evolution Algorithm with Binary and Continuous Encoding for the MKP. , 2013, , . | | 14 |
| 41 | A Heterogeneous Parallel Ecologically-Inspired Approach Applied to the 3D-AB Off-Lattice Protein Structure Prediction Problem. , 2013, , . | | 8 |
| 42 | An improved parallel differential evolution approach for protein structure prediction using both 2D and 3D off-lattice models. , 2013, , . | | 12 |
| 43 | Solving the base station placement problem by means of swarm intelligence. , 2013, , . | | 4 |
| 44 | A Heuristic Algorithm Based on Ant Colony Optimization for Multi-objective Routing in Vehicle Ad Hoc Networks. , 2013, , . | | 12 |
| 45 | A fast modular simulator for combinational logic circuits generated by genetic algorithm. , 2013, , . | | 0 |
| 46 | An Ecology-Based Evolutionary Algorithm Applied to the 2D-AB Off-Lattice Protein Structure Prediction Problem. , 2013, , . | | 4 |
| 47 | A Survey of Swarm Algorithms Applied to Discrete Optimization Problems. , 2013, , 169-191. | | 86 |
| 48 | Ab-Initio Protein Folding Using Molecular Dynamics and a Simplified Off-Lattice Model. Journal of Bionanoscience, 2013, 7, 391-402. | 0.4 | 2 |
| 49 | A new greedy heuristic for 3DHP protein struture prediction with side chain. , 2012, , . | | 0 |
| 50 | Biological plausibility in optimisation: an ecosystemic view. International Journal of Bio-Inspired Computation, 2012, 4, 345. | 0.6 | 6 |
| 51 | A comparison of swarm intelligence algorithms for structural engineering optimization. International Journal for Numerical Methods in Engineering, 2012, 91, 666-684. | 1.5 | 23 |
| 52 | Parallelism, hybridism and coevolution in a multiâ€‘level ABCâ€‘GA approach for the protein structure prediction problem. Concurrency Computation Practice and Experience, 2012, 24, 635-646. | 1.4 | 9 |
| 53 | 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 |
| 54 | An Improved ABC Algorithm Approach Using SURF for Face Identification. Lecture Notes in Computer Science, 2012, , 143-150. | 1.0 | 4 |

| # | Article | IF | Citations |
|---|---------|-----|-----------|
| 55 | Population Resizing Using Nonlinear Dynamics in an Ecology-Based Approach. Lecture Notes in Computer Science, 2012, , 27-34. | 1.0 | 1 |
| 56 | An eco-inspired evolutionary algorithm applied to numerical optimization. , 2011, , . | | 20 |
| 57 | Parallel Approaches for the Artificial Bee Colony Algorithm. Adaptation, Learning, and Optimization, 2011, , 329-345. | 0.5 | 21 |
| 58 | 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 |
| 59 | A genetic programming method for protein motif discovery and protein classification. Soft Computing, 2011, 15, 1897-1908. | 2.1 | 1 |
| 60 | Discrete Capacity Assignment in IP networks using Particle Swarm Optimization. Applied Mathematics and Computation, 2011, 217, 5338-5346. | 1.4 | 13 |
| 61 | 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 |
| 62 | 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 |
| 63 | A FPGA-BASED RECONFIGURABLE PARALLEL ARCHITECTURE FOR HIGH-PERFORMANCE NUMERICAL COMPUTATION. Journal of Circuits, Systems and Computers, 2011, 20, 849-865. | 1.0 | 2 |
| 64 | New inspirations in swarm intelligence: a survey. International Journal of Bio-Inspired Computation, 2011, 3, 1. | 0.6 | 341 |
| 65 | 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 |
| 66 | 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 |
| 67 | 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 |
| 68 | 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 |
| 69 | 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 |
| 70 | 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 |
| 71 | 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 |
| 72 | 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 |

| # | Article | IF | Citations |
|---|---------|-----|-----------|
| 73 | Hierarchical Parallel Genetic Algorithm applied to the three-dimensional HP Side-chain Protein Folding Problem. , 2010, , . | | 13 |
| 74 | MAHATMA: A Genetic Programming-Based Tool for Protein Classification. , 2009, , . | | 1 |
| 75 | Construction and improvement heuristics applied to the capacitated vehicle routing problem. , 2009, , . | | 6 |
| 76 | A parallel genetic algorithm for protein folding prediction using the 3D-HP Side Chain model. , 2009, , . | | 7 |
| 77 | A comparison of FPGA and FPAA technologies for a signal processing application. , 2009, , . | | 9 |
| 78 | A new approach for template matching in digital images using an Artificial Bee Colony Algorithm. , 2009, , . | | 27 |
| 79 | Evaluation of Weight Matrix Models in the splice junction recognition problem. , 2009, , . | | 2 |
| 80 | A study of topology in insular Parallel Genetic Algorithms. , 2009, , . | | 6 |
| 81 | Computers in Physical Therapy Education: Interactive Multimedia Learning with MuStreT. Informatics in Education, 2009, 8, 157-172. | 1.8 | 2 |
| 82 | 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 |
| 83 | Modeling and Building an Ontology for Neuropediatric Physiotherapy Domain. , 2008, , . | | 3 |
| 84 | Supply chain optimisation using evolutionary algorithms. International Journal of Computer Applications in Technology, 2008, 31, 158. | 0.3 | 22 |
| 85 | Particle Swarm Optimization for Object Recognition in Computer Vision. Lecture Notes in Computer Science, 2008, , 11-21. | 1.0 | 10 |
| 86 | Evolutionary Algorithms for the Protein Folding Problem: A Review and Current Trends. Studies in Computational Intelligence, 2008, , 297-315. | 0.7 | 39 |
| 87 | 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 |
| 88 | A Compact Genetic Algorithm with Elitism and Mutation Applied to Image Recognition. Lecture Notes in Computer Science, 2008, , 1109-1116. | 1.0 | 1 |
| 89 | 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 |
| 90 | Automatic FIR Filter Design Method and Tool based on Genetic Algorithms. , 2007, , . | | 3 |

| # | Article | IF | Citations |
|---|---------|-----|-----------|
| 91 | Particle Swarm Optimization for the Multidimensional Knapsack Problem. Lecture Notes in Computer Science, 2007, , 358-365. | 1.0 | 43 |
| 92 | A CONFIGWARE APPROACH FOR HIGH-SPEED PARALLEL ANALYSIS OF GENOMIC DATA. Journal of Circuits, Systems and Computers, 2007, 16, 527-540. | 1.0 | 13 |
| 93 | Genetic Programming for Induction of Context-Free Grammars. , 2007, , . | | 2 |
| 94 | Genetic programming for epileptic pattern recognition in electroencephalographic signals. Applied Soft Computing Journal, 2007, 7, 343-352. | 4.1 | 20 |
| 95 | A Differential Evolution Approach for Protein Folding Using a Lattice Model. Journal of Computer Science and Technology, 2007, 22, 904-908. | 0.9 | 20 |
| 96 | Reconfigurable Computing for Accelerating Protein Folding Simulations. , 2007, , 314-325. | | 7 |
| 97 | Reconfigurable Parallel Architecture for Genetic Algorithms: Application to the Synthesis of Digital Circuits. , 2007, , 326-336. | | 3 |
| 98 | Multiple Sequence Alignment Using Reconfigurable Computing. , 2007, , 379-384. | | 1 |
| 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 | Preliminary Steps Towards Protein Folding Prediction Using Reconfigurable Computing. , 2006, , . | | 1 |
| 102 | Implementation of a Parallel Algorithm for Protein Pairwise Alignment Using Reconfigurable Computing. , 2006, , . | | 5 |
| 103 | Hardalign: a parallel pairwise alignment hardware application. , 2006, , . | | 0 |
| 104 | A Differential Evolution Approach for Protein Folding. , 2006, , . | | 11 |
| 105 | Supply Chain Optimization Using Chaotic Differential Evolution Method. , 2006, , . | | 4 |
| 106 | A Dose-Response Model for the Conventional Phototherapy of the Newborn. Journal of Clinical Monitoring and Computing, 2006, 20, 159-164. | 0.7 | 2 |
| 107 | Automatic motif discovery in an enzyme database using a genetic algorithm-based approach. Soft Computing, 2006, 10, 325-330. | 2.1 | 4 |
| 108 | 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 |

| # | Article | IF | Citations |
|---|---|---|---|
| 109 | Genetic Programming with Incremental Learning for Grammatical Inference. , 2006, , . | | 2 |
| 110 | An Electric Energy Quality Meter Using Hardware Reconfigurable Computing. , 2006, , . | | 1 |
| 111 | GEPCLASS: A Classification Rule Discovery Tool Using Gene Expression Programming. Lecture Notes in Computer Science, 2006, , 871-880. | 1.0 | 24 |
| 112 | A Graph-Based Genetic Algorithm for the Multiple Sequence Alignment Problem. Lecture Notes in Computer Science, 2006, , 420-429. | 1.0 | 3 |
| 113 | A distributed approach for a multiple sequence alignment algorithm using a parallel virtual machine. , 2005, 2005, 2843-6. | | 10 |
| 114 | Phototherapy of the Newborn: a Predictive Model for the Outcome. , 2005, 2005, 6725-8. | | 1 |
| 115 | A hybrid particle swarm optimization model for the traveling salesman problem. , 2005, , 255-258. | | 13 |
| 116 | Object Detection for Computer Vision Using a Robust Genetic Algorithm. Lecture Notes in Computer Science, 2005, , 284-293. | 1.0 | 4 |
| 117 | Self-Adapting Evolutionary Parameters: Encoding Aspects for Combinatorial Optimization Problems. Lecture Notes in Computer Science, 2005, , 154-165. | 1.0 | 25 |
| 118 | An Evolutionary Approach for Motif Discovery and Transmembrane Protein Classification. Lecture Notes in Computer Science, 2005, , 105-114. | 1.0 | 2 |
| 119 | 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 |
| 120 | Neural networks for protein classification. Applied Bioinformatics, 2004, 3, 41-48. | 1.7 | 29 |
| 121 | An Artificial Immune System for Fuzzy-Rule Induction in Data Mining. Lecture Notes in Computer Science, 2004, , 1011-1020. | 1.0 | 41 |
| 122 | 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 |
| 123 | Data mining with an ant colony optimization algorithm. IEEE Transactions on Evolutionary Computation, 2002, 6, 321-332. | 7.5 | 785 |
| 124 | Genetic Algorithms for the Assembly Line Balancing Problem: A Real-World Automotive Application. , 2002, , 319-327. | | 6 |
| 125 | Mining Comprehensible Rules from Data with an Ant Colony Algorithm. Lecture Notes in Computer Science, 2002, , 259-269. | 1.0 | 1 |
| 126 | Genetic programming for knowledge discovery in chest-pain diagnosis. IEEE Engineering in Medicine and Biology Magazine, 2000, 19, 38-44. | 1.1 | 95 |

| # | Article | IF | Citations |
|---|---------|----|-----------|
| 127 | Detection of epileptic events using genetic programming. , 0, , . | | 9 |
| 128 | Detection of movement-related desynchronization of the EEG using neural networks. , 0, , . | | 6 |
| 129 | A genetic approach to ARMA filter synthesis for EEG signal simulation. , 0, , . | | 3 |
| 130 | Discovering comprehensible classification rules with a genetic algorithm. , 0, , . | | 91 |
| 131 | Using a chain of LVQ neural networks for pattern recognition of EEG signals related to intermittent photic-stimulation. , 0, , . | | 7 |
| 132 | Mobile computing on telemedicine and distance learning:application on surgery pediatric oncology. , 0, , . | | 0 |
| 133 | Bioluminescent Swarm Optimization Algorithm. , 0, , . | | 7 |
| 134 | AnÃ¡lise da fragmentaÃ§Ã£o partidÃ¡ria na Assembleia Legislativa do Rio Grande do Sul com MÃ©todos de MineraÃ§Ã£o de Dados. , 0, , . | | 0 |
| 135 | A Transfer Learning Approach for the Tattoo Detection Problem. , 0, , . | | 0 |
| 136 | A Comparative Study for Open Set Semantic Segmentation Methods. , 0, , . | | 2 |
| 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 |