

Leonardo Franco

List of Publications by Year in descending order

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84
papers

2,064
citations

279798

23
h-index

265206

42
g-index

90
all docs

90
docs citations

90
times ranked

2166
citing authors

#	ARTICLE	IF	CITATIONS
1	Missing data imputation using statistical and machine learning methods in a real breast cancer problem. <i>Artificial Intelligence in Medicine</i> , 2010, 50, 105-115.	6.5	381
2	Object, Space, and Object-Space Representations in the Primate Hippocampus. <i>Journal of Neurophysiology</i> , 2005, 94, 833-844.	1.8	127
3	Improving classification accuracy using data augmentation on small data sets. <i>Expert Systems With Applications</i> , 2020, 161, 113696.	7.6	104
4	Pattern of recurrence of early breast cancer is different according to intrinsic subtype and proliferation index. <i>Breast Cancer Research</i> , 2013, 15, R98.	5.0	91
5	Forward Noise Adjustment Scheme for Data Augmentation. , 2018, , .		74
6	Neuronal selectivity, population sparseness, and ergodicity in the inferior temporal visual cortex. <i>Biological Cybernetics</i> , 2007, 96, 547-560.	1.3	73
7	Layer multiplexing FPGA implementation for deep back-propagation learning. <i>Integrated Computer-Aided Engineering</i> , 2017, 24, 171-185.	4.6	66
8	Efficient Implementation of the Backpropagation Algorithm in FPGAs and Microcontrollers. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2016, 27, 1840-1850.	11.3	62
9	Object Perception in Natural Scenes: Encoding by Inferior Temporal Cortex Simultaneously Recorded Neurons. <i>Journal of Neurophysiology</i> , 2005, 93, 1342-1357.	1.8	61
10	Transfer learning with convolutional neural networks for cancer survival prediction using gene-expression data. <i>PLoS ONE</i> , 2020, 15, e0230536.	2.5	60
11	An Information Theoretic Approach to the Contributions of the Firing Rates and the Correlations Between the Firing of Neurons. <i>Journal of Neurophysiology</i> , 2003, 89, 2810-2822.	1.8	58
12	Improvement of breast cancer relapse prediction in high risk intervals using artificial neural networks. <i>Breast Cancer Research and Treatment</i> , 2005, 94, 265-272.	2.5	53
13	Information encoding in the inferior temporal visual cortex: contributions of the firing rates and the correlations between the firing of neurons. <i>Biological Cybernetics</i> , 2004, 90, 19-32.	1.3	48
14	Prediction of Subjective Affective State From Brain Activations. <i>Journal of Neurophysiology</i> , 2009, 101, 1294-1308.	1.8	45
15	The use of decoding to analyze the contribution to the information of the correlations between the firing of simultaneously recorded neurons. <i>Experimental Brain Research</i> , 2004, 155, 370-384.	1.5	41
16	A New Decomposition Algorithm for Threshold Synthesis and Generalization of Boolean Functions. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2008, 55, 3188-3196.	5.4	38
17	Neural Network Architecture Selection: Can Function Complexity Help?. <i>Neural Processing Letters</i> , 2009, 30, 71-87.	3.2	37
18	FPGA Implementation of the C-Mantec Neural Network Constructive Algorithm. <i>IEEE Transactions on Industrial Informatics</i> , 2014, 10, 1154-1161.	11.3	36

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19	Information in the first spike, the order of spikes, and the number of spikes provided by neurons in the inferior temporal visual cortex. <i>Vision Research</i> , 2006, 46, 4193-4205.	1.4	31
20	Optimal prediction of mortality after abdominal aortic aneurysm repair with statistical models. <i>Journal of Vascular Surgery</i> , 2006, 43, 467-473.e3.	1.1	29
21	C-Mantec: A novel constructive neural network algorithm incorporating competition between neurons. <i>Neural Networks</i> , 2012, 26, 130-140.	5.9	28
22	Generalization and Selection of Examples in Feedforward Neural Networks. <i>Neural Computation</i> , 2000, 12, 2405-2426.	2.2	25
23	Serum protein levels following surgery in breast cancer patients: A protein microarray approach. <i>International Journal of Oncology</i> , 2012, 41, 2200-2206.	3.3	25
24	Robust gene signatures from microarray data using genetic algorithms enriched with biological pathway keywords. <i>Journal of Biomedical Informatics</i> , 2014, 49, 32-44.	4.3	24
25	Application of genetic algorithms and constructive neural networks for the analysis of microarray cancer data. <i>Theoretical Biology and Medical Modelling</i> , 2014, 11, S7.	2.1	24
26	Deep Learning to Analyze RNA-Seq Gene Expression Data. <i>Lecture Notes in Computer Science</i> , 2017, , 50-59.	1.3	24
27	A neural network facial expression recognition system using unsupervised local processing. , 0, , .		23
28	Generalization properties of modular networks: implementing the parity function. <i>IEEE Transactions on Neural Networks</i> , 2001, 12, 1306-1313.	4.2	23
29	Smart sensor/actuator node reprogramming in changing environments using a neural network model. <i>Engineering Applications of Artificial Intelligence</i> , 2014, 30, 179-188.	8.1	23
30	Generalization ability of Boolean functions implemented in feedforward neural networks. <i>Neurocomputing</i> , 2006, 70, 351-361.	5.9	22
31	The Perirhinal Cortex and Long-Term Familiarity Memory. <i>Quarterly Journal of Experimental Psychology Section B: Comparative and Physiological Psychology</i> , 2005, 58, 234-245.	2.8	21
32	Addressing critical issues in the development of an Oncology Information System. <i>International Journal of Medical Informatics</i> , 2013, 82, 398-407.	3.3	21
33	The influence of oppositely classified examples on the generalization complexity of Boolean functions. <i>IEEE Transactions on Neural Networks</i> , 2006, 17, 578-590.	4.2	18
34	Constructive Neural Network Algorithms for Feedforward Architectures Suitable for Classification Tasks. <i>Studies in Computational Intelligence</i> , 2009, , 1-23.	0.9	18
35	Multiclass Pattern Recognition Extension for the New C-Mantec Constructive Neural Network Algorithm. <i>Cognitive Computation</i> , 2010, 2, 285-290.	5.2	18
36	Spatial and meteorological relevance in NO2 estimations: a case study in the Bay of Algeciras (Spain). <i>Stochastic Environmental Research and Risk Assessment</i> , 2019, 33, 801-815.	4.0	18

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37	High precision FPGA implementation of neural network activation functions. , 2014, , .		17
38	Solving arithmetic problems using feed-forward neural networks. Neurocomputing, 1998, 18, 61-79.	5.9	14
39	Machine learning and natural language processing (NLP) approach to predict early progression to first-line treatment in real-world hormone receptor-positive (HR+)/HER2-negative advanced breast cancer patients. European Journal of Cancer, 2021, 144, 224-231.	2.8	12
40	FPGA Hardware Acceleration of Monte Carlo Simulations for the Ising Model. IEEE Transactions on Parallel and Distributed Systems, 2016, 27, 2618-2627.	5.6	11
41	On a generalization complexity measure for Boolean functions. , 0, , .		8
42	Early Breast Cancer Prognosis Prediction and Rule Extraction Using a New Constructive Neural Network Algorithm. , 2007, , 1004-1011.		8
43	Non-glassy ground state in a long-range antiferromagnetic frustrated model in the hypercubic cell. Physica A: Statistical Mechanics and Its Applications, 2004, 332, 337-348.	2.6	7
44	Noisy Chaotic time series forecast approximated by combining Reny's entropy with Energy associated to series method: application to rainfall series. IEEE Latin America Transactions, 2017, 15, 1318-1325.	1.6	7
45	A Transfer-Learning Approach to Feature Extraction from Cancer Transcriptomes with Deep Autoencoders. Lecture Notes in Computer Science, 2019, , 912-924.	1.3	7
46	PREDICTION OF CARBON MONOXIDE (CO) ATMOSPHERIC POLLUTION CONCENTRATIONS USING METEROLOGICAL VARIABLES. , 2017, , .		7
47	Implementation of the C-Mantec Neural Network Constructive Algorithm in an Arduino Uno Microcontroller. Lecture Notes in Computer Science, 2013, , 80-87.	1.3	5
48	FPGA Implementation of Neurocomputational Models: Comparison Between Standard Back-Propagation and C-Mantec Constructive Algorithm. Neural Processing Letters, 2017, 46, 899-914.	3.2	5
49	BLASSO: integration of biological knowledge into a regularized linear model. BMC Systems Biology, 2018, 12, 94.	3.0	5
50	Computational capabilities of multilayer committee machines. Journal of Physics A: Mathematical and Theoretical, 2010, 43, 445103.	2.1	4
51	WIMP: Web server tool for missing data imputation. Computer Methods and Programs in Biomedicine, 2012, 108, 1247-1254.	4.7	4
52	Supervised discretization can discover risk groups in cancer survival analysis. Computer Methods and Programs in Biomedicine, 2016, 136, 11-19.	4.7	4
53	Classification of high dimensional data using LASSO ensembles. , 2017, , .		4
54	Neural Network Architecture Selection: Size Depends on Function Complexity. Lecture Notes in Computer Science, 2006, , 122-129.	1.3	4

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55	Active Learning Using a Constructive Neural Network Algorithm. Lecture Notes in Computer Science, 2008, , 803-811.	1.3	4
56	GAN-Based Data Augmentation for Prediction Improvement Using Gene Expression Data in Cancer. Lecture Notes in Computer Science, 2022, , 28-42.	1.3	4
57	FPGA Implementation Comparison Between C-Mantec and Back-Propagation Neural Network Algorithms. Lecture Notes in Computer Science, 2015, , 197-208.	1.3	3
58	Machine learning models to search relevant genetic signatures in clinical context. , 2017, , .		3
59	Bayesian enhanced ensemble approach (BEEA) for time series forecasting. , 2018, , .		3
60	Improving learning and generalization capabilities of the C-Mantec constructive neural network algorithm. Neural Computing and Applications, 2020, 32, 8955-8963.	5.6	3
61	Active Learning Using a Constructive Neural Network Algorithm. Studies in Computational Intelligence, 2009, , 193-206.	0.9	3
62	A New Constructive Approach for Creating All Linearly Separable (Threshold) Functions. , 2006, , .		2
63	The Generalization Complexity Measure for Continuous Input Data. Scientific World Journal, The, 2014, 2014, 1-9.	2.1	2
64	Time-series prediction with BEMCA approach: Application to short rainfall series. , 2017, , .		2
65	Time Series Forecasting using Recurrent Neural Networks modified by Bayesian Inference in the Learning Process. , 2019, , .		2
66	Editorial: AI and Multi-Omics for Rare Diseases: Challenges, Advances and Perspectives. Frontiers in Molecular Biosciences, 2021, 8, 719978.	3.5	2
67	A Constructive Neural Network to Predict Pitting Corrosion Status of Stainless Steel. Lecture Notes in Computer Science, 2013, , 88-95.	1.3	2
68	L_1 -regularization Model Enriched with Biological Knowledge. Lecture Notes in Computer Science, 2017, , 579-590.	1.3	2
69	Bayesian Inference for Training of Long Short Term Memory Models in Chaotic Time Series Forecasting. Communications in Computer and Information Science, 2019, , 197-208.	0.5	2
70	A New Constructive Approach for Creating All Linearly Separable (Threshold) Functions. , 0, , .		1
71	Advanced Online Survival Analysis Tool for Predictive Modelling in Clinical Data Science. PLoS ONE, 2016, 11, e0161135.	2.5	1
72	Deep Neural Network Architecture Implementation on FPGAs Using a Layer Multiplexing Scheme. Advances in Intelligent Systems and Computing, 2016, , 79-86.	0.6	1

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73	Committee C-Mantec: A Probabilistic Constructive Neural Network. Lecture Notes in Computer Science, 2013, , 339-346.	1.3	1
74	Data Augmentation Techniques to Improve Metabolomic Analysis in Niemann-Pick Type C Disease. Lecture Notes in Computer Science, 2022, , 78-91.	1.3	1
75	Extension of the Generalization Complexity Measure to Real Valued Input Data Sets. Lecture Notes in Computer Science, 2010, , 86-94.	1.3	0
76	Noisy chaotic time series forecast approximated by combining Reny's entropy with energy associated to series method: Application to rainfall series. , 2016, , .		0
77	Integration of Relational Databases in ethical decision-making for autonomous vehicles. , 2018, , .		0
78	CBA generated receptive fields implemented in a Facial expression recognition task. Lecture Notes in Computer Science, 2003, , 734-741.	1.3	0
79	MaxSet: An Algorithm for Finding a Good Approximation for the Largest Linearly Separable Set. Lecture Notes in Computer Science, 2007, , 648-656.	1.3	0
80	Information encoding in the inferior temporal visual cortex: contributions of the firing rates and the correlations between the firing of neurons. Journal of Vision, 2010, 2, 425-425.	0.3	0
81	Use of q-values to Improve a Genetic Algorithm to Identify Robust Gene Signatures. Lecture Notes in Computer Science, 2015, , 199-206.	1.3	0
82	Thermal comfort estimation using a neurocomputational model. , 2016, , .		0
83	Solving Scheduling Problems with Genetic Algorithms Using a Priority Encoding Scheme. Lecture Notes in Computer Science, 2017, , 52-61.	1.3	0
84	Short-Term Rainfall Forecasting with E-LSTM Recurrent Neural Networks Using Small Datasets. Lecture Notes in Computer Science, 2020, , 258-270.	1.3	0