Valmir Carneiro Barbosa

List of Publications by Year
in descending order

134 papers	2,486 citations	304743 22 h-index	223800 46 g-index
137 all docs	137 docs citations	137 times ranked	4114 citing authors

#	Article	IF	Citations
1	Analyzing marginal cases in differential shotgun proteomics. Bioinformatics, 2011, 27, 275-276.	4.1	474
2	Integrated analysis of shotgun proteomic data with PatternLab for proteomics 4.0. Nature Protocols, 2016, 11, 102-117.	12.0	257
3	PatternLab for proteomics: a tool for differential shotgun proteomics. BMC Bioinformatics, 2008, 9, 316.	2.6	127
4	Search engine processor: Filtering and organizing peptide spectrum matches. Proteomics, 2012, 12, 944-949.	2.2	107
5	XDIA: improving on the label-free data-independent analysis. Bioinformatics, 2010, 26, 847-848.	4.1	104
6	Concurrency in heavily loaded neighborhood-constrained systems. ACM Transactions on Programming Languages and Systems, 1989, 11, 562-584.	2.1	86
7	Identifying differences in protein expression levels by spectral counting and feature selection. Genetics and Molecular Research, 2008, 7, 342-356.	0.2	78
8	Improving the TFold test for differential shotgun proteomics. Bioinformatics, 2012, 28, 1652-1654.	4.1	73
9	SIM-XL: A powerful and user-friendly tool for peptide cross-linking analysis. Journal of Proteomics, 2015, 129, 51-55.	2.4	73
10	YADA: a tool for taking the most out of high-resolution spectra. Bioinformatics, 2009, 25, 2734-2736.	4.1	67
11	On best practices in the development of bioinformatics software. Frontiers in Genetics, 2014, 5, 199.	2.3	53
12	Characterization of homodimer interfaces with cross-linking mass spectrometry and isotopically labeled proteins. Nature Protocols, 2018, 13, 431-458.	12.0	47
13	PatternLab: From Mass Spectra to Labelâ€Free Differential Shotgun Proteomics. Current Protocols in Bioinformatics, 2012, 40, Unit13.19.	25.8	39
14	GO Explorer: A gene-ontology tool to aid in the interpretation of shotgun proteomics data. Proteome Science, 2009, 7, 6.	1.7	35
15	Can the falseâ€discovery rate be misleading?. Proteomics, 2011, 11, 4105-4108.	2.2	34
16	V-like Formations in Flocks of Artificial Birds. Artificial Life, 2008, 14, 179-188.	1.3	33
17	PepExplorer: A Similarity-driven Tool for Analyzing de Novo Sequencing Results. Molecular and Cellular Proteomics, 2014, 13, 2480-2489.	3.8	33
18	Probabilistic Heuristics for Disseminating Information in Networks. IEEE/ACM Transactions on Networking, 2007, 15, 425-435.	3.8	29

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19	A distributed algorithm to find k-dominating sets. Discrete Applied Mathematics, 2004, 141, 243-253.	0.9	27
20	Simple, efficient and thorough shotgun proteomic analysis with PatternLab V. Nature Protocols, 2022, 17, 1553-1578.	12.0	26
21	Analyzing Shotgun Proteomic Data with PatternLab for Proteomics. Current Protocols in Bioinformatics, 2010, 30, Unit 13.13.1-15.	25.8	24
22	Are Gastric Cancer Resection Margin Proteomic Profiles More Similar to Those from Controls or Tumors?. Journal of Proteome Research, 2012, 11, 5836-5842.	3.7	24
23	Dynamic proteomic overview of glioblastoma cells (A172) exposed to perillyl alcohol. Journal of Proteomics, 2010, 73, 1018-1027.	2.4	23
24	Early appraisal of the fixation probability in directed networks. Physical Review E, 2010, 82, 046114.	2.1	22
25	A distributed implementation of simulated annealing. Journal of Parallel and Distributed Computing, 1989, 6, 411-434.	4.1	21
26	On the distributed parallel simulation of Hopfield's neural networks. Software - Practice and Experience, 1990, 20, 967-983.	3.6	21
27	Generating all the acyclic orientations of an undirected graph. Information Processing Letters, 1999, 72, 71-74.	0.6	21
28	A multi-protease, multi-dissociation, bottom-up-to-top-down proteomic view of the Loxosceles intermedia venom. Scientific Data, 2017, 4, 170090.	5.3	21
29	Finding approximate palindromes in strings. Pattern Recognition, 2002, 35, 2581-2591.	8.1	20
30	Two Novel Evolutionary Formulations of the Graph Coloring Problem. Journal of Combinatorial Optimization, 2004, 8, 41-63.	1.3	20
31	Effectively addressing complex proteomic search spaces with peptide spectrum matching. Bioinformatics, 2013, 29, 1343-1344.	4.1	20
32	An algorithm for clock synchronization with the gradient property in sensor networks. Journal of Parallel and Distributed Computing, 2009, 69, 261-265.	4.1	19
33	Sharing Resources at Nonuniform Access Rates. Theory of Computing Systems, 2000, 34, 13-26.	1.1	18
34	Exploring the Proteomic Landscape of a Gastric Cancer Biopsy with the Shotgun Imaging Analyzer. Journal of Proteome Research, 2014, 13, 314-320.	3.7	18
35	A Novel Evolutionary Formulation of the Maximum Independent Set Problem. Journal of Combinatorial Optimization, 2004, 8, 419-437.	1.3	17
36	Dissemination strategy for immunizing scale-free networks. Physical Review E, 2006, 74, 056105.	2.1	15

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37	Charge Prediction Machine: Tool for Inferring Precursor Charge States of Electron Transfer Dissociation Tandem Mass Spectra. Analytical Chemistry, 2009, 81, 1996-2003.	6.5	15
38	On the phase transitions of graph coloring and independent sets. Physica A: Statistical Mechanics and Its Applications, 2004, 343, 401-423.	2.6	14
39	Distributed Breakpoint Detection in Message-Passing Programs. Journal of Parallel and Distributed Computing, 1996, 39, 153-167.	4.1	13
40	Learning in the combinatorial neural model. IEEE Transactions on Neural Networks, 1998, 9, 831-847.	4.2	13
41	A Bayesian-Network Approach to Lexical Disambiguation. Cognitive Science, 1993, 17, 257-283.	1.7	11
42	Pinpointing differentially expressed domains in complex protein mixtures with the cloud service of PatternLab for Proteomics. Journal of Proteomics, 2013, 89, 179-182.	2.4	11
43	Differential proteomic comparison of breast cancer secretome using a quantitative paired analysis workflow. BMC Cancer, 2019, 19, 365.	2.6	11
44	Strategies for the prevention of communication deadlocks in distributed parallel programs. IEEE Transactions on Software Engineering, 1990, 16, 1311-1316.	5.6	10
45	Quasispecies dynamics with network constraints. Journal of Theoretical Biology, 2012, 312, 114-119.	1.7	10
46	Directed cycles and related structures in random graphs: Iâ€"Static properties. Physica A: Statistical Mechanics and Its Applications, 2003, 321, 381-397.	2.6	9
47	Scheduling links for heavy traffic on interfering routes in wireless mesh networks. Computer Networks, 2012, 56, 1584-1598.	5.1	9
48	A scoring model for phosphopeptide site localization and its impact on the question of whether to use MSA. Journal of Proteomics, 2015, 129, 42-50.	2.4	9
49	Learning Logic Programs with Neural Networks. Lecture Notes in Computer Science, 2001, , 15-26.	1.3	9
50	A graph model for the evolution of specificity in humoral immunity. Journal of Theoretical Biology, 2004, 229, 311-325.	1.7	8
51	Handling flash-crowd events to improve the performance of web applications. , 2015, , .		8
52	Mixed-Data Acquisition: Next-Generation Quantitative Proteomics Data Acquisition. Journal of Proteomics, 2020, 222, 103803.	2.4	8
53	The Combinatorics of Resource Sharing. Applied Optimization, 2002, , 27-52.	0.4	8
54	A neural system for deforestation monitoring on Landsat images of the Amazon Region. International Journal of Approximate Reasoning, 1994, 11, 321-359.	3.3	7

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55	Acyclic Orientations with Path Constraints. RAIRO - Operations Research, 2008, 42, 455-467.	1.8	7
56	DiagnoProt: a tool for discovery of new molecules by mass spectrometry. Bioinformatics, 2017, 33, 1883-1885.	4.1	7
57	Fast linear system solution by neural networks. Operations Research Letters, 1992, 11, 141-145.	0.7	6
58	Emergence of scale-free networks from local connectivity and communication trade-offs. Physical Review E, 2006, 74, 016113.	2.1	6
59	Network growth for enhanced natural selection. Physical Review E, 2009, 80, 026115.	2.1	6
60	Structured construction and simulation of nondeterministic stochastic activity networks. European Journal of Operational Research, 2009, 198, 266-274.	5.7	6
61	The Interleaved Multichromatic Number of a Graph. Annals of Combinatorics, 2002, 6, 249-256.	0.6	5
62	Local heuristics and the emergence of spanning subgraphs in complex networks. Theoretical Computer Science, 2006, 355, 80-95.	0.9	5
63	Descents and nodal load in scale-free networks. Physical Review E, 2008, 77, 046111.	2.1	5
64	Network algorithmics and the emergence of the cortical synaptic-weight distribution. Physical Review E, 2010, 81, 021916.	2.1	5
65	Scheduling wireless links by vertex multicoloring in the physical interference model. Computer Networks, 2016, 99, 125-133.	5.1	5
66	Deadlock models in distributed computation. , 2016, , .		5
67	An Occam-based evaluation of a parallel version of simulated annealing. Microprocessing and Microprogramming, 1990, 30, 85-92.	0.2	4
68	On reducing the complexity of matrix clocks. Parallel Computing, 2003, 29, 895-905.	2.1	4
69	Finding routes in anonymous sensor networks. Information Processing Letters, 2006, 98, 139-144.	0.6	4
70	Exploiting the distribution of distances between nodes to efficiently solve the localization problem in wireless sensor networks. , 2010, , .		4
71	Network algorithmics and the emergence of information integration in cortical models. Physical Review E, 2011, 84, 011904.	2.1	4
72	Local heuristic for the refinement of multi-path routing in wireless mesh networks. Computer Networks, 2013, 57, 273-285.	5.1	4

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73	Using PepExplorer to Filter and Organize <i>De Novo</i> Peptide Sequencing Results. Current Protocols in Bioinformatics, 2015, 51, 13.27.1-13.27.9.	25.8	4
74	Early detection of epilepsy seizures based on a weightless neural network. , 2015, 2015, 4470-4.		4
75	Information Integration from Distributed Threshold-Based Interactions. Complexity, 2017, 2017, 1-14.	1.6	4
76	Top-Down Garbage Collector: a tool for selecting high-quality top-down proteomics mass spectra. Bioinformatics, 2019, 35, 3489-3490.	4.1	4
77	Using SIM-XL to identify and annotate cross-linked peptides analyzed by mass spectrometry. Protocol Exchange, 0, , .	0.3	4
78	Specification of a communication virtual processor for parallel processing systems. Microprocessing and Microprogramming, 1988, 24, 511-518.	0.2	3
79	Feasible directions linear programming by neural networks. , 1990, , .		3
80	Monitoring the deforestation of the Amazon region with neural networks. , 0, , .		3
81	A priority dynamics for generalized drinking philosophers. Information Processing Letters, 2001, 79, 189-195.	0.6	3
82	Partially ordered distributed computations on asynchronous point-to-point networks. Parallel Computing, 2009, 35, 12-28.	2.1	3
83	Towards a Hybrid Model of First-Order Theory Refinement. Lecture Notes in Computer Science, 2000, , 92-106.	1.3	3
84	Quasispecies dynamics on a network of interacting genotypes and idiotypes: formulation of the model. Journal of Statistical Mechanics: Theory and Experiment, 2015, 2015, P01022.	2.3	3
85	From distributed algorithms to OCCAM programs by successive refinements. Journal of Systems and Software, 1994, 26, 257-272.	4.5	2
86	Defeasible time-stepping. Parallel Computing, 1999, 25, 461-489.	2.1	2
87	Cell-centric heuristics for the classification of cellular automata. Parallel Computing, 2006, 32, 44-66.	2.1	2
88	Scheduling Cyclic Task Graphs with SCC-Map. , 2012, , .		2
89	The network structure of mathematical knowledge according to the Wikipedia, MathWorld, and DLMF online libraries. Network Science, 2014, 2, 367-386.	1.0	2
90	Quasispecies dynamics on a network of interacting genotypes and idiotypes: applications to autoimmunity and immunodeficiency. Journal of Statistical Mechanics: Theory and Experiment, 2016, 2016, 063501.	2.3	2

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91	Adaptive event sensing in networks of autonomous mobile agents. Journal of Network and Computer Applications, 2016, 71, 118-129.	9.1	2
92	Coevolution of the mitotic and meiotic modes of eukaryotic cellular division. Physical Review E, 2018, 98, .	2.1	2
93	Counting trees with random walks. , 2019, 37, 96-102.		2
94	Scheduling Wireless Links in the Physical Interference Model by Fractional Edge Coloring. IEEE Wireless Communications Letters, 2020, 9, 528-532.	5.0	2
95	MPH â€" A Hybrid Parallel Machine. Microprocessing and Microprogramming, 1989, 25, 229-232.	0.2	1
96	Blocking versus nonblocking interprocess communication: a note on the effect on concurrency. Information Processing Letters, 1990, 36, 171-175.	0.6	1
97	An integrated software environment for large-scale Occam programming. Microprocessing and Microprogramming, 1991, 32, 393-400.	0.2	1
98	An algorithm for FIFO message delivery among migrating tasks. Information Processing Letters, 1995, 53, 261-267.	0.6	1
99	Instruction usage and the memory gap problem. , 0, , .		1
100	Directed cycles and related structures in random graphs: IIâ€"Dynamic properties. Physica A: Statistical Mechanics and Its Applications, 2004, 334, 566-582.	2.6	1
101	A graph model for the evolution of specificity in humoral immunity. Journal of Theoretical Biology, 2004, 229, 311-311.	1.7	1
102	Emergence of scale-free behavior in networks from limited-horizon linking and cost trade-offs. Physica A: Statistical Mechanics and Its Applications, 2008, 387, 1016-1024.	2.6	1
103	Network Conduciveness with Application to the Graph-Coloring and Independent-Set Optimization Transitions. PLoS ONE, 2010, 5, e11232.	2.5	1
104	The predecessor-existence problem for k-reversible processes. Theoretical Computer Science, 2015, 562, 406-418.	0.9	1
105	Power-law decay of the degree-sequence probabilities of multiple random graphs with application to graph isomorphism. ESAIM - Probability and Statistics, 2017, 21, 235-250.	0.5	1
106	A computational study of f-reversible processes on graphs. Discrete Applied Mathematics, 2018, 245, 77-93.	0.9	1
107	A quantitation module for isotope-labeled peptides integrated into PatternLab for proteomics. Journal of Proteomics, 2019, 202, 103371.	2.4	1
108	Local Symmetry in Random Graphs. IEEE Transactions on Network Science and Engineering, 2020, 7, 1913-1924.	6.4	1

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109	Interspecies evolutionary dynamics mediated by public goods in bacterial quorum sensing. Physical Review E, 2021, 103, 012403.	2.1	1
110	Minimal Chordal Sense of Direction and Circulant Graphs. Lecture Notes in Computer Science, 2006, , 670-680.	1.3	1
111	Approximate Conditional Distributions of Distances between Nodes in a Two-Dimensional Sensor Network. Lecture Notes in Computer Science, 2009, , 324-338.	1.3	1
112	Micro-instruction placement by simulated annealing. Microprocessing and Microprogramming, 1991, 32, 23-28.	0.2	0
113	Learning in analog Hopfield networks. , 0, , .		0
114	A string-matching algorithm for the CREW PRAM. Information Processing Letters, 1993, 47, 257-259.	0.6	0
115	A BUU Code for Parallel Computers. International Journal of Modern Physics C, 1998, 09, 573-583.	1.7	0
116	A distributed algorithm for k-dominating sets. Electronic Notes in Discrete Mathematics, 2001, 7, 130-133.	0.4	0
117	Generating all the cubic graphs that have a 6-cycle double cover. Electronic Notes in Discrete Mathematics, 2005, 19, 87-93.	0.4	0
118	Two-dimensional cellular automata and the analysis of correlated time series. Pattern Recognition Letters, 2006, 27, 1353-1360.	4.2	0
119	Modeling the Input History of Programs for Improved Instruction-Memory Performance. Computer Journal, 2006, 49, 744-761.	2.4	0
120	Reachability and recoverability of sink nodes in growing acyclic directed networks. Physica A: Statistical Mechanics and Its Applications, 2008, 387, 685-693.	2.6	0
121	Optimization of supply diversity for the self-assembly of simple objects in two and three dimensions. Natural Computing, 2011, 10, 551-581.	3.0	0
122	The Conduciveness of CA-Rule Graphs. Artificial Life, 2013, 19, 255-266.	1.3	0
123	Cooperation in Cognitive Radio Networks. , 2014, , .		0
124	Revisiting deadlock prevention: A probabilistic approach. Networks, 2014, 63, 203-210.	2.7	0
125	Further insights into the interareal connectivity of a cortical network. Network Science, 2015, 3, 526-550.	1.0	0
126	A note on counting independent terms in asymptotic expressions of computational complexity. Optimization Letters, 2017, 11, 1757-1765.	1.6	0

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127	Information-theoretic signatures of biodiversity in the barcoding gene. Journal of Theoretical Biology, 2018, 451, 111-116.	1.7	0
128	Sketching Data Structures for Massive Graph Problems. Lecture Notes in Computer Science, 2019, , 57-67.	1.3	0
129	Leveraging the partition selection bias to achieve a high-quality clustering of mass spectra. Journal of Proteomics, 2021, 245, 104282.	2.4	0
130	Multiple Sequence Alignment Based on Set Covers. Lecture Notes in Computer Science, 2006, , 127-137.	1.3	0
131	A Methodology for Determining Amino-Acid Substitution Matrices from Set Covers. Lecture Notes in Computer Science, 2006, , 138-148.	1.3	0
132	EVOLVED PREAMBLES FOR MAX-SAT HEURISTICS. , 2011, , .		0
133	Error-Prone Cellular Automata as Metaphors of Immunity as Computation. Complex Systems, 2015, 24, 93-112.	0.3	0
134	Integrated Optimization of Heterogeneous-Network Management and the Elusive Role of Macrocells. IEEE Access, 2021, 9, 149552-149559.	4.2	0