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	Simple, efficient and thorough shotgun proteomic analysis with PatternLab V. Nature Protocols, 2022, 17, 1553-1578.	12.0	26
2	Leveraging the partition selection bias to achieve a high-quality clustering of mass spectra. Journal of Proteomics, 2021, 245, 104282.	2.4	0
3	Interspecies evolutionary dynamics mediated by public goods in bacterial quorum sensing. Physical Review E, 2021, 103, 012403.	2.1	1
4	Integrated Optimization of Heterogeneous-Network Management and the Elusive Role of Macrocells. IEEE Access, 2021, 9, 149552-149559.	4.2	0
5	Local Symmetry in Random Graphs. IEEE Transactions on Network Science and Engineering, 2020, 7, 1913-1924.	6.4	1
6	Mixed-Data Acquisition: Next-Generation Quantitative Proteomics Data Acquisition. Journal of Proteomics, 2020, 222, 103803.	2.4	8
7	Scheduling Wireless Links in the Physical Interference Model by Fractional Edge Coloring. IEEE Wireless Communications Letters, 2020, 9, 528-532.	5.0	2
8	Counting trees with random walks. , 2019, 37, 96-102.		2
9	Sketching Data Structures for Massive Graph Problems. Lecture Notes in Computer Science, 2019, , 57-67.	1.3	0
10	A quantitation module for isotope-labeled peptides integrated into PatternLab for proteomics. Journal of Proteomics, 2019, 202, 103371.	2.4	1
11	Differential proteomic comparison of breast cancer secretome using a quantitative paired analysis workflow. BMC Cancer, 2019, 19, 365.	2.6	11
12	Top-Down Garbage Collector: a tool for selecting high-quality top-down proteomics mass spectra. Bioinformatics, 2019, 35, 3489-3490.	4.1	4
13	Characterization of homodimer interfaces with cross-linking mass spectrometry and isotopically labeled proteins. Nature Protocols, 2018, 13, 431-458.	12.0	47
14	A computational study of f-reversible processes on graphs. Discrete Applied Mathematics, 2018, 245, 77-93.	0.9	1
15	Coevolution of the mitotic and meiotic modes of eukaryotic cellular division. Physical Review E, 2018, 98, .	2.1	2
16	Information-theoretic signatures of biodiversity in the barcoding gene. Journal of Theoretical Biology, 2018, 451, 111-116.	1.7	0
17	DiagnoProt: a tool for discovery of new molecules by mass spectrometry. Bioinformatics, 2017, 33, 1883-1885.	4.1	7
18	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

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19	A note on counting independent terms in asymptotic expressions of computational complexity. Optimization Letters, 2017, 11, 1757-1765.	1.6	0
20	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
21	Information Integration from Distributed Threshold-Based Interactions. Complexity, 2017, 2017, 1-14.	1.6	4
22	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
23	Adaptive event sensing in networks of autonomous mobile agents. Journal of Network and Computer Applications, 2016, 71, 118-129.	9.1	2
24	Integrated analysis of shotgun proteomic data with PatternLab for proteomics 4.0. Nature Protocols, 2016, 11, 102-117.	12.0	257
25	Scheduling wireless links by vertex multicoloring in the physical interference model. Computer Networks, 2016, 99, 125-133.	5.1	5
26	Deadlock models in distributed computation. , 2016, , .		5
27	Further insights into the interareal connectivity of a cortical network. Network Science, 2015, 3, 526-550.	1.0	0
28	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
29	Early detection of epilepsy seizures based on a weightless neural network. , 2015, 2015, 4470-4.		4
30	SIM-XL: A powerful and user-friendly tool for peptide cross-linking analysis. Journal of Proteomics, 2015, 129, 51-55.	2.4	73
31	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
32	Handling flash-crowd events to improve the performance of web applications. , 2015, , .		8
33	The predecessor-existence problem for k-reversible processes. Theoretical Computer Science, 2015, 562, 406-418.	0.9	1
34	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
35	Error-Prone Cellular Automata as Metaphors of Immunity as Computation. Complex Systems, 2015, 24, 93-112.	0.3	0
36	On best practices in the development of bioinformatics software. Frontiers in Genetics, 2014, 5, 199.	2.3	53

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37	Cooperation in Cognitive Radio Networks. , 2014, , .		0
38	Revisiting deadlock prevention: A probabilistic approach. Networks, 2014, 63, 203-210.	2.7	0
39	The network structure of mathematical knowledge according to the Wikipedia, MathWorld, and DLMF online libraries. Network Science, 2014, 2, 367-386.	1.0	2
40	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
41	PepExplorer: A Similarity-driven Tool for Analyzing de Novo Sequencing Results. Molecular and Cellular Proteomics, 2014, 13, 2480-2489.	3.8	33
42	Local heuristic for the refinement of multi-path routing in wireless mesh networks. Computer Networks, 2013, 57, 273-285.	5.1	4
43	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
44	Effectively addressing complex proteomic search spaces with peptide spectrum matching. Bioinformatics, 2013, 29, 1343-1344.	4.1	20
45	The Conduciveness of CA-Rule Graphs. Artificial Life, 2013, 19, 255-266.	1.3	0
46	Improving the TFold test for differential shotgun proteomics. Bioinformatics, 2012, 28, 1652-1654.	4.1	73
47	Scheduling Cyclic Task Graphs with SCC-Map. , 2012, , .		2
48	Quasispecies dynamics with network constraints. Journal of Theoretical Biology, 2012, 312, 114-119.	1.7	10
49	PatternLab: From Mass Spectra to Label–Free Differential Shotgun Proteomics. Current Protocols in Bioinformatics, 2012, 40, Unit13.19.	25.8	39
50	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
51	Search engine processor: Filtering and organizing peptide spectrum matches. Proteomics, 2012, 12, 944-949.	2.2	107
52	Scheduling links for heavy traffic on interfering routes in wireless mesh networks. Computer Networks, 2012, 56, 1584-1598.	5.1	9
53	Network algorithmics and the emergence of information integration in cortical models. Physical Review E, 2011, 84, 011904.	2.1	4
54	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

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55	Can the false‐discovery rate be misleading?. Proteomics, 2011, 11, 4105-4108.	2.2	34
56	Analyzing marginal cases in differential shotgun proteomics. Bioinformatics, 2011, 27, 275-276.	4.1	474
57	EVOLVED PREAMBLES FOR MAX-SAT HEURISTICS. , 2011, , .		0
58	Dynamic proteomic overview of glioblastoma cells (A172) exposed to perillyl alcohol. Journal of Proteomics, 2010, 73, 1018-1027.	2.4	23
59	Network Conduciveness with Application to the Graph-Coloring and Independent-Set Optimization Transitions. PLoS ONE, 2010, 5, e11232.	2.5	1
60	Network algorithmics and the emergence of the cortical synaptic-weight distribution. Physical Review E, 2010, 81, 021916.	2.1	5
61	XDIA: improving on the label-free data-independent analysis. Bioinformatics, 2010, 26, 847-848.	4.1	104
62	Exploiting the distribution of distances between nodes to efficiently solve the localization problem in wireless sensor networks. , 2010, , .		4
63	Analyzing Shotgun Proteomic Data with PatternLab for Proteomics. Current Protocols in Bioinformatics, 2010, 30, Unit 13.13.1-15.	25.8	24
64	Early appraisal of the fixation probability in directed networks. Physical Review E, 2010, 82, 046114.	2.1	22
65	Network growth for enhanced natural selection. Physical Review E, 2009, 80, 026115.	2.1	6
66	YADA: a tool for taking the most out of high-resolution spectra. Bioinformatics, 2009, 25, 2734-2736.	4.1	67
67	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
68	Structured construction and simulation of nondeterministic stochastic activity networks. European Journal of Operational Research, 2009, 198, 266-274.	5.7	6
69	Partially ordered distributed computations on asynchronous point-to-point networks. Parallel Computing, 2009, 35, 12-28.	2.1	3
70	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
71	GO Explorer: A gene-ontology tool to aid in the interpretation of shotgun proteomics data. Proteome Science, 2009, 7, 6.	1.7	35
72	Approximate Conditional Distributions of Distances between Nodes in a Two-Dimensional Sensor Network. Lecture Notes in Computer Science, 2009, , 324-338.	1.3	1

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73	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
74	PatternLab for proteomics: a tool for differential shotgun proteomics. BMC Bioinformatics, 2008, 9, 316.	2.6	127
75	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
76	Acyclic Orientations with Path Constraints. RAIRO - Operations Research, 2008, 42, 455-467.	1.8	7
77	V-like Formations in Flocks of Artificial Birds. Artificial Life, 2008, 14, 179-188.	1.3	33
78	Descents and nodal load in scale-free networks. Physical Review E, 2008, 77, 046111.	2.1	5
79	Identifying differences in protein expression levels by spectral counting and feature selection. Genetics and Molecular Research, 2008, 7, 342-356.	0.2	78
80	Probabilistic Heuristics for Disseminating Information in Networks. IEEE/ACM Transactions on Networking, 2007, 15, 425-435.	3.8	29
81	Cell-centric heuristics for the classification of cellular automata. Parallel Computing, 2006, 32, 44-66.	2.1	2
82	Two-dimensional cellular automata and the analysis of correlated time series. Pattern Recognition Letters, 2006, 27, 1353-1360.	4.2	0
83	Local heuristics and the emergence of spanning subgraphs in complex networks. Theoretical Computer Science, 2006, 355, 80-95.	0.9	5
84	Finding routes in anonymous sensor networks. Information Processing Letters, 2006, 98, 139-144.	0.6	4
85	Dissemination strategy for immunizing scale-free networks. Physical Review E, 2006, 74, 056105.	2.1	15
86	Emergence of scale-free networks from local connectivity and communication trade-offs. Physical Review E, 2006, 74, 016113.	2.1	6
87	Modeling the Input History of Programs for Improved Instruction-Memory Performance. Computer Journal, 2006, 49, 744-761.	2.4	0
88	Multiple Sequence Alignment Based on Set Covers. Lecture Notes in Computer Science, 2006, , 127-137.	1.3	0
89	A Methodology for Determining Amino-Acid Substitution Matrices from Set Covers. Lecture Notes in Computer Science, 2006, , 138-148.	1.3	0
90	Minimal Chordal Sense of Direction and Circulant Graphs. Lecture Notes in Computer Science, 2006, , 670-680.	1.3	1

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91	Generating all the cubic graphs that have a 6-cycle double cover. Electronic Notes in Discrete Mathematics, 2005, 19, 87-93.	0.4	0
92	Two Novel Evolutionary Formulations of the Graph Coloring Problem. Journal of Combinatorial Optimization, 2004, 8, 41-63.	1.3	20
93	A graph model for the evolution of specificity in humoral immunity. Journal of Theoretical Biology, 2004, 229, 311-325.	1.7	8
94	A Novel Evolutionary Formulation of the Maximum Independent Set Problem. Journal of Combinatorial Optimization, 2004, 8, 419-437.	1.3	17
95	A distributed algorithm to find k-dominating sets. Discrete Applied Mathematics, 2004, 141, 243-253.	0.9	27
96	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
97	A graph model for the evolution of specificity in humoral immunity. Journal of Theoretical Biology, 2004, 229, 311-311.	1.7	1
98	On the phase transitions of graph coloring and independent sets. Physica A: Statistical Mechanics and Its Applications, 2004, 343, 401-423.	2.6	14
99	On reducing the complexity of matrix clocks. Parallel Computing, 2003, 29, 895-905.	2.1	4
100	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
101	The Interleaved Multichromatic Number of a Graph. Annals of Combinatorics, 2002, 6, 249-256.	0.6	5
102	Finding approximate palindromes in strings. Pattern Recognition, 2002, 35, 2581-2591.	8.1	20
103	The Combinatorics of Resource Sharing. Applied Optimization, 2002, , 27-52.	0.4	8
104	A distributed algorithm for k-dominating sets. Electronic Notes in Discrete Mathematics, 2001, 7, 130-133.	0.4	0
105	A priority dynamics for generalized drinking philosophers. Information Processing Letters, 2001, 79, 189-195.	0.6	3
106	Learning Logic Programs with Neural Networks. Lecture Notes in Computer Science, 2001, , 15-26.	1.3	9
107	Sharing Resources at Nonuniform Access Rates. Theory of Computing Systems, 2000, 34, 13-26.	1.1	18
108	Towards a Hybrid Model of First-Order Theory Refinement. Lecture Notes in Computer Science, 2000, , 92-106.	1.3	3

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109	Defeasible time-stepping. Parallel Computing, 1999, 25, 461-489.	2.1	2
110	Generating all the acyclic orientations of an undirected graph. Information Processing Letters, 1999, 72, 71-74.	0.6	21
111	Learning in the combinatorial neural model. IEEE Transactions on Neural Networks, 1998, 9, 831-847.	4.2	13
112	A BUU Code for Parallel Computers. International Journal of Modern Physics C, 1998, 09, 573-583.	1.7	0
113	Distributed Breakpoint Detection in Message-Passing Programs. Journal of Parallel and Distributed Computing, 1996, 39, 153-167.	4.1	13
114	An algorithm for FIFO message delivery among migrating tasks. Information Processing Letters, 1995, 53, 261-267.	0.6	1
115	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
116	From distributed algorithms to OCCAM programs by successive refinements. Journal of Systems and Software, 1994, 26, 257-272.	4.5	2
117	A string-matching algorithm for the CREW PRAM. Information Processing Letters, 1993, 47, 257-259.	0.6	0
118	A Bayesian-Network Approach to Lexical Disambiguation. Cognitive Science, 1993, 17, 257-283.	1.7	11
119	Fast linear system solution by neural networks. Operations Research Letters, 1992, 11, 141-145.	0.7	6
120	Micro-instruction placement by simulated annealing. Microprocessing and Microprogramming, 1991, 32, 23-28.	0.2	0
121	An integrated software environment for large-scale Occam programming. Microprocessing and Microprogramming, 1991, 32, 393-400.	0.2	1
122	On the distributed parallel simulation of Hopfield's neural networks. Software - Practice and Experience, 1990, 20, 967-983.	3.6	21
123	Blocking versus nonblocking interprocess communication: a note on the effect on concurrency. Information Processing Letters, 1990, 36, 171-175.	0.6	1
124	An Occam-based evaluation of a parallel version of simulated annealing. Microprocessing and Microprogramming, 1990, 30, 85-92.	0.2	4
125	Feasible directions linear programming by neural networks. , 1990, , .		3
126	Strategies for the prevention of communication deadlocks in distributed parallel programs. IEEE Transactions on Software Engineering, 1990, 16, 1311-1316.	5.6	10

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127	Concurrency in heavily loaded neighborhood-constrained systems. ACM Transactions on Programming Languages and Systems, 1989, 11, 562-584.	2.1	86
128	A distributed implementation of simulated annealing. Journal of Parallel and Distributed Computing, 1989, 6, 411-434.	4.1	21
129	MPH â€" A Hybrid Parallel Machine. Microprocessing and Microprogramming, 1989, 25, 229-232.	0.2	1
130	Specification of a communication virtual processor for parallel processing systems. Microprocessing and Microprogramming, 1988, 24, 511-518.	0.2	3
131	Learning in analog Hopfield networks. , 0, , .		0
132	Monitoring the deforestation of the Amazon region with neural networks. , 0, , .		3
133	Instruction usage and the memory gap problem. , 0, , .		1
134	Using SIM-XL to identify and annotate cross-linked peptides analyzed by mass spectrometry. Protocol Exchange, 0, , .	0.3	4