Carlos M Fonseca

List of Publications by Year
in descending order

58 papers	7,857 citations	257101 24 h-index	233125 45 g-index
60 all docs	60 docs citations	60 times ranked	4847 citing authors

#	Article	IF	Citations
1	Performance assessment of multiobjective optimizers: an analysis and review. IEEE Transactions on Evolutionary Computation, 2003, 7, 117-132.	7.5	3,206
2	An Overview of Evolutionary Algorithms in Multiobjective Optimization. Evolutionary Computation, 1995, 3, 1-16.	2.3	1,865
3	Multiobjective optimization and multiple constraint handling with evolutionary algorithms. I. A unified formulation. IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans, 1998, 28, 26-37.	3.4	960
4	Multiobjective optimization and multiple constraint handling with evolutionary algorithms. II. Application example. IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans, 1998, 28, 38-47.	3.4	310
5	On the Complexity of Computing the Hypervolume Indicator. IEEE Transactions on Evolutionary Computation, 2009, 13, 1075-1082.	7.5	220
6	Inferential Performance Assessment of Stochastic Optimisers and the Attainment Function. Lecture Notes in Computer Science, 2001, , 213-225.	1.0	115
7	Identifying the Structure of NonLinear Dynamic Systems Using Multiobjective Genetic Programming. IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans, 2004, 34, 531-545.	3.4	89
8	The Hypervolume Indicator. ACM Computing Surveys, 2022, 54, 1-42.	16.1	59
9	Nonlinear identification of aircraft gas-turbine dynamics. Neurocomputing, 2003, 55, 551-579.	3.5	50
10	A box decomposition algorithm to compute the hypervolume indicator. Computers and Operations Research, 2017, 79, 347-360.	2.4	48
11	Hypervolume Subset Selection in Two Dimensions: Formulations and Algorithms. Evolutionary Computation, 2016, 24, 411-425.	2.3	45
12	Methodology to select solutions from the pareto-optimal set. , 2007, , .		42
13	Greedy Hypervolume Subset Selection in Low Dimensions. Evolutionary Computation, 2016, 24, 521-544.	2.3	42
14	Exploring the Performance of Stochastic Multiobjective Optimisers with the Second-Order Attainment Function. Lecture Notes in Computer Science, 2005, , 250-264.	1.0	41
15	Computing Hypervolume Contributions in Low Dimensions: Asymptotically Optimal Algorithm and Complexity Results. Lecture Notes in Computer Science, 2011, , 121-135.	1.0	36
16	Power distribution network expansion scheduling using dynamic programming genetic algorithm. IET Generation, Transmission and Distribution, 2008, 2, 444.	1.4	35
17	Penalized likelihood and multi-objective spatial scans for the detection and inference of irregular clusters. International Journal of Health Geographics, 2010, 9, 55.	1.2	34
18	Nonlinear Network Optimization—An Embedding Vector Space Approach. IEEE Transactions on Evolutionary Computation, 2010, 14, 206-226.	7.5	33

#	ARTICLE	IF	CITATIONS
19	Computing and Updating Hypervolume Contributions in Up to Four Dimensions. IEEE Transactions on Evolutionary Computation, 2018, 22, 449-463.	7.5	33
20	A Multicriteria Generalization of Bayesian Global Optimization. Springer Optimization and Its Applications, 2016, , 229-242.	0.6	32
21	On the performance of linkage-tree genetic algorithms for the multidimensional knapsack problem. Neurocomputing, 2014, 146, 17-29.	3.5	26
22	On the Generalization Ability of Geometric Semantic Genetic Programming. Lecture Notes in Computer Science, 2015, , 41-52.	1.0	26
23	On the Computation of the Empirical Attainment Function. Lecture Notes in Computer Science, 2011, , 106-120.	1.0	25
24	A multi-objective evolutionary algorithm to exploit the similarities of resource allocation problems. Journal of Scheduling, 2008, 11, 405-419.	1.3	24
25	Representation of the non-dominated set in biobjective discrete optimization. Computers and Operations Research, 2015, 63, 172-186.	2.4	24
26	A Portfolio Optimization Approach to Selection in Multiobjective Evolutionary Algorithms. Lecture Notes in Computer Science, 2014, , 672-681.	1.0	21
27	Computing 3-D Expected Hypervolume Improvement and Related Integrals in Asymptotically Optimal Time. Lecture Notes in Computer Science, 2017, , 685-700.	1.0	17
28	Non-Linear System Identification with Multiobjective Genetic Algorithms. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1996, 29, 1169-1174.	0.4	15
29	An analysis of the Hypervolume Sharpe-Ratio Indicator. European Journal of Operational Research, 2020, 283, 614-629.	3.5	15
30	A preliminary comparison of tree encoding schemes for evolutionary algorithms. , 2007, , .		14
31	Multi-Objective Evolutionary Algorithm for University Class Timetabling Problem. Studies in Computational Intelligence, 2007, , 197-236.	0.7	14
32	The Attainment-Function Approach to Stochastic Multiobjective Optimizer Assessment and Comparison. , 2010, , 103-130.		14
33	Greedy Hypervolume Subset Selection in the Three-Objective Case. , 2015, , .		13
34	Easy to say they are Hard, but Hard to see they are Easy- Towards a Categorization of Tractable Multiobjective Combinatorial Optimization Problems. Journal of Multi-Criteria Decision Analysis, 2017, 24, 82-98.	1.0	11
35	On Optimization and Extreme Value Theory. Methodology and Computing in Applied Probability, 2003, 5, 183-195.	0.7	8
36	Unsure when to stop?. , 2017, , .		8

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37	On the rectangular knapsack problem: approximation of a specific quadratic knapsack problem. Mathematical Methods of Operations Research, 2020, 92, 107-132.	0.4	8
38	Arbitrarily Close Alignments in the Error Space. , 2016, , .		7
39	Assessing the quality of the relation between scalarizing function parameters and solutions in multiobjective optimization. , 2009, , .		6
40	The Relationship between the Covered Fraction, Completeness and Hypervolume Indicators. Lecture Notes in Computer Science, 2012, , 25-36.	1.0	6
41	Hypervolume Sharpe-Ratio Indicator: Formalization and First Theoretical Results. Lecture Notes in Computer Science, 2016, , 814-823.	1.0	6
42	Methodology to select solutions for multiobjective optimization problems: Weighted stress function method. Journal of Multi-Criteria Decision Analysis, 2017, 24, 103-120.	1.0	6
43	Bi-objective Combined Facility Location and Network Design. , 2007, , 486-500.		6
44	Semantic Learning Machine: A Feedforward Neural Network Construction Algorithm Inspired by Geometric Semantic Genetic Programming. Lecture Notes in Computer Science, 2015, , 280-285.	1.0	5
45	Multi-objective Evolutionary Algorithms for Resource Allocation Problems. , 2007, , 401-416.		4
46	On the roles of redundancy and neutrality in evolutionary optimization. , 2007, , .		3
47	How redundancy and neutrality may affect evolution on NK fitness landscapes. , 2007, , .		3
48	A link between the multivariate cumulative distribution function and the hitting function for random closed sets. Statistics and Probability Letters, 2002, 57, 179-182.	0.4	2
49	A Comparative Study of Algorithms for Solving the Multiobjective Open-Pit Mining Operational Planning Problems. Lecture Notes in Computer Science, 2015, , 433-447.	1.0	2
50	A Compressive Receding Horizon Approach for Smart Home Energy Management. IEEE Access, 2021, 9, 100407-100435.	2.6	2
51	A New Methodology to Select the Preferred Solutions from the Pareto-optimal Set: Application to Polymer Extrusion. AIP Conference Proceedings, 2007, , .	0.3	1
52	A Multi-Quantile Approach for Open-Loop Stochastic Dynamic Programming Problems*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 52-57.	0.4	1
53	Energyâ€efficient multigroup communication. Transactions on Emerging Telecommunications Technologies, 2018, 29, e3232.	2.6	1
54	Geometric Crossover in Syntactic Space. Lecture Notes in Computer Science, 2018, , 237-252.	1.0	1

#	Article	IF	Citations
55	A unified model of optimisation problems. , 2007, , .		0
56	Tutorials at PPSN 2016. Lecture Notes in Computer Science, 2016, , 1012-1022.	1.0	0
57	Guest Editorial Special Issue on Theoretical Foundations of Evolutionary Computation. IEEE Transactions on Evolutionary Computation, 2020, 24, 993-994.	7.5	0
58	Decision Making in Evolutionary Optimization (Abstract of Invited Talk). , 2007, , 3-3.		0