Pietro S Oliveto

List of Publications by Year
in descending order

75 papers	1,675 citations	471061 17 h-index	454577 30 g-index
76 all docs	76 docs citations	76 times ranked	521 citing authors

#	Article	IF	Citations
1	Time complexity of evolutionary algorithms for combinatorial optimization: A decade of results. International Journal of Automation and Computing, 2007, 4, 281-293.	4.5	167
2	Escaping Local Optima Using Crossover With Emergent Diversity. IEEE Transactions on Evolutionary Computation, 2018, 22, 484-497.	7.5	118
3	Improved time complexity analysis of the Simple Genetic Algorithm. Theoretical Computer Science, 2015, 605, 21-41.	0.5	106
4	Simplified Drift Analysis for Proving Lower Bounds inÂEvolutionary Computation. Algorithmica, 2011, 59, 369-386.	1.0	103
5	Standard Steady State Genetic Algorithms Can Hillclimb Faster Than Mutation-Only Evolutionary Algorithms. IEEE Transactions on Evolutionary Computation, 2018, 22, 720-732.	7.5	96
6	Analysis of Diversity-Preserving Mechanisms for Global Exploration. Evolutionary Computation, 2009, 17, 455-476.	2.3	83
7	Analysis of the $(1+1)$-EA for Finding Approximate Solutions to Vertex Cover Problems. IEEE Transactions on Evolutionary Computation, 2009, 13, 1006-1029.	7.5	82
8	Theoretical analysis of fitness-proportional selection. , 2009, , .		58
9	On the runtime analysis of the Simple Genetic Algorithm. Theoretical Computer Science, 2014, 545, 2-19.	0.5	57
10	Escaping Local Optima with Diversity Mechanisms and Crossover. , 2016, , .		47
11	On the runtime analysis of selection hyper-heuristics with adaptive learning periods. , 2018, , .		38
12	On the Time Complexity of Algorithm Selection Hyper-Heuristics for Multimodal Optimisation. Proceedings of the AAAI Conference on Artificial Intelligence, 2019, 33, 2322-2329.	3.6	35
13	On the Convergence of Immune Algorithms. , 2007, , .		34
14	Analysis of population-based evolutionary algorithms for the vertex cover problem. , 2008, , .		31
15	On the effectiveness of crossover for migration in parallel evolutionary algorithms. , 2011, , .		28
16	On the runtime analysis of generalised selection hyper-heuristics for pseudo-boolean optimisation. , 2017, , .		27
17	Theoretical analysis of rank-based mutation - combining exploration and exploitation. , 2009, , .		26
18	Simple Hyper-Heuristics Control the Neighbourhood Size of Randomised Local Search Optimally for LeadingOnes. Evolutionary Computation, 2020, 28, 437-461.	2.3	26

#	ARTICLE	IF	CITATIONS
19	Theoretical analysis of diversity mechanisms for global exploration. , 2008, , .		25
20	On the benefits and risks of using fitness sharing for multimodal optimisation. Theoretical Computer Science, 2019, 773, 53-70.	0.5	25
21	Artificial immune systems can find arbitrarily good approximations for the NP-hard number partitioning problem. Artificial Intelligence, 2019, 274, 180-196.	3.9	25
22	On the runtime analysis of the opt-IA artificial immune system. , 2017, , .		24
23	How to Escape Local Optima in Black Box Optimisation: When Non-elitism Outperforms Elitism. Algorithmica, 2018, 80, 1604-1633.	1.0	23
24	When hypermutations and ageing enable artificial immune systems to outperform evolutionary algorithms. Theoretical Computer Science, 2020, 832, 166-185.	0.5	23
25	Simplified Drift Analysis for Proving Lower Bounds in Evolutionary Computation. Lecture Notes in Computer Science, 2008, , 82-91.	1.0	23
26	Approximating vertex cover using edge-based representations. , 2013, , .		22
27	Analysis of diversity mechanisms for optimisation in dynamic environments with low frequencies of change. Theoretical Computer Science, 2015, 561, 37-56.	0.5	21
28	Fast Artificial Immune Systems. Lecture Notes in Computer Science, 2018, , 67-78.	1.0	20
29	On the Analysis of the Immune-Inspired B-Cell Algorithm for the Vertex Cover Problem. Lecture Notes in Computer Science, 2011, , 117-131.	1.0	17
30	On Easiest Functions for Mutation Operators in Bio-Inspired Optimisation. Algorithmica, 2017, 78, 714-740.	1.0	17
31	On the runtime analysis of stochastic ageing mechanisms. , 2014, , .		16
32	On the Benefits of Populations for the Exploitation Speed of Standard Steady-State Genetic Algorithms. Algorithmica, 2020, 82, 3676-3706.	1.0	16
33	Fixed Parameter Evolutionary Algorithms and Maximum Leaf Spanning Trees: A Matter of Mutation. , 2010, , 204-213.		15
34	Ant colony optimization and the minimum cut problem. , 2010, , .		14
35	Emergence of Diversity and Its Benefits for Crossover in Genetic Algorithms. Lecture Notes in Computer Science, 2016, , 890-900.	1.0	14
36	A tight lower bound on the expected runtime of standard steady state genetic algorithms. , 2020, , .		14

#	Article	IF	Citations
37	On the benefits of populations for the exploitation speed of standard steady-state genetic algorithms. , 2019, , .		13
38	Analysis of diversity mechanisms for optimisation in dynamic environments with low frequencies of change. , 2013, , .		11
39	On Steady-State Evolutionary Algorithms and Selective Pressure: Why Inverse Rank-Based Allocation of Reproductive Trials Is Best. ACM Transactions on Evolutionary Learning, 2021, 1, 1-38.	2.7	11
40	On the analysis of the simple genetic algorithm. , 2012, , .		9
41	On the Runtime Analysis ofÂFitnessÂSharingÂMechanisms. Lecture Notes in Computer Science, 2014, , 932-941.	1.0	9
42	How the Duration of the Learning Period Affects the Performance of Random Gradient Selection Hyper-Heuristics. Proceedings of the AAAI Conference on Artificial Intelligence, 2020, 34, 2376-2383.	3.6	9
43	On the Analysis of Simple Genetic Programming for Evolving Boolean Functions. Lecture Notes in Computer Science, 2016, , 99-114.	1.0	8
44	Automatic adaptation of hypermutation rates for multimodal optimisation. , 2021, , .		8
45	Fast Immune System-Inspired Hypermutation Operators for Combinatorial Optimization. IEEE Transactions on Evolutionary Computation, 2021, 25, 956-970.	7.5	8
46	On the Time and Space Complexity of Genetic Programming for Evolving Boolean Conjunctions. Journal of Artificial Intelligence Research, 0, 66, 655-689.	7.0	8
47	Standard steady state genetic algorithms can hillclimb faster than evolutionary algorithms using standard bit mutation. , 2018, , .		7
48	On the impact of the cutoff time on the performance of algorithm configurators. , 2019, , .		7
49	Tight Bounds on the Expected Runtime of a Standard Steady State Genetic Algorithm. Algorithmica, 2022, 84, 1603-1658.	1.0	7
50	When Non-Elitism Outperforms Elitism for Crossing Fitness Valleys. , 2016, , .		6
51	On Easiest Functions for Somatic Contiguous Hypermutations And Standard Bit Mutations. , 2015, , .		5
52	Theoretical Analysis of Stochastic Search Algorithms. , 2018, , 1-36.		5
53	Theoretical Analysis of Stochastic Search Algorithms. , 2018, , 849-884.		4
54	On inversely proportional hypermutations with mutation potential. , 2019, , .		4

#	ARTICLE	IF	CITATIONS
55	Artificial Immune Systems Can Find Arbitrarily Good Approximations for the NP-Hard Partition Problem. Lecture Notes in Computer Science, 2018, , 16-28.	1.0	4
56	Improved runtime analysis of the simple genetic algorithm. , 2013, , .		3
57	On the impact of the performance metric on efficient algorithm configuration. Artificial Intelligence, 2021, , 103629.	3.9	3
58	When is it beneficial to reject improvements?. , 2017, , .		2
59	Evolving boolean functions with conjunctions and disjunctions via genetic programming. , 2019, , .		2
60	Rigorous Performance Analysis of Hyper-heuristics. Natural Computing Series, 2021, , 45-71.	2.2	2
61	Runtime analysis of evolutionary algorithms. , 2013, , .		1
62	Runtime Analysis of Population-based Evolutionary Algorithms. , 2016, , .		1
63	Runtime analysis of population-based evolutionary algorithms. , 2017, , .		1
64	Do sophisticated evolutionary algorithms perform better than simple ones?. , 2020, , .		1
65	Runtime analysis of evolutionary algorithms. , 2014, , .		0
66	Editorial for the Special Issue on Theory of Evolutionary Algorithms 2014. Evolutionary Computation, 2015, 23, 509-511.	2.3	0
67	Runtime Analysis of Evolutionary Algorithms. , 2015, , .		0
68	Tutorials at PPSN 2016. Lecture Notes in Computer Science, 2016, , 1012-1022.	1.0	0
69	Runtime analysis of evolutionary algorithms. , 2018, , .		0
70	Runtime analysis of evolutionary algorithms: basic introduction. , 2019, , .		0
71	On the Analysis of Trajectory-Based Search Algorithms: When is it Beneficial to Reject Improvements?. Algorithmica, 2019, 81, 858-885.	1.0	0
72	Guest Editorial Special Issue on Theoretical Foundations of Evolutionary Computation. IEEE Transactions on Evolutionary Computation, 2020, 24, 993-994.	7.5	0

#	Article	IF	Citations
73	Runtime analysis of evolutionary algorithms. , 2021, , .		0
74	Runtime analysis of population-based evolutionary algorithms. , 2021, , .		0
75	Runtime analysis of population-based evolutionary algorithms. , 2020, , .		0