

Pietro S Oliveto

List of Publications by Year in descending order

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Version: 2024-02-01

75
papers

1,675
citations

471509

17
h-index

454955

30
g-index

76
all docs

76
docs citations

76
times ranked

521
citing authors

#	ARTICLE	IF	CITATIONS
1	Tight Bounds on the Expected Runtime of a Standard Steady State Genetic Algorithm. <i>Algorithmica</i> , 2022, 84, 1603-1658.	1.3	7
2	Rigorous Performance Analysis of Hyper-heuristics. <i>Natural Computing Series</i> , 2021, , 45-71.	2.2	2
3	On Steady-State Evolutionary Algorithms and Selective Pressure: Why Inverse Rank-Based Allocation of Reproductive Trials Is Best. <i>ACM Transactions on Evolutionary Learning</i> , 2021, 1, 1-38.	3.5	11
4	Runtime analysis of evolutionary algorithms. , 2021, , .		0
5	Runtime analysis of population-based evolutionary algorithms. , 2021, , .		0
6	Automatic adaptation of hypermutation rates for multimodal optimisation. , 2021, , .		8
7	Fast Immune System-Inspired Hypermutation Operators for Combinatorial Optimization. <i>IEEE Transactions on Evolutionary Computation</i> , 2021, 25, 956-970.	10.0	8
8	On the impact of the performance metric on efficient algorithm configuration. <i>Artificial Intelligence</i> , 2021, , 103629.	5.8	3
9	When hypermutations and ageing enable artificial immune systems to outperform evolutionary algorithms. <i>Theoretical Computer Science</i> , 2020, 832, 166-185.	0.9	23
10	Simple Hyper-Heuristics Control the Neighbourhood Size of Randomised Local Search Optimally for LeadingOnes. <i>Evolutionary Computation</i> , 2020, 28, 437-461.	3.0	26
11	On the Benefits of Populations for the Exploitation Speed of Standard Steady-State Genetic Algorithms. <i>Algorithmica</i> , 2020, 82, 3676-3706.	1.3	16
12	Guest Editorial Special Issue on Theoretical Foundations of Evolutionary Computation. <i>IEEE Transactions on Evolutionary Computation</i> , 2020, 24, 993-994.	10.0	0
13	A tight lower bound on the expected runtime of standard steady state genetic algorithms. , 2020, , .		14
14	How the Duration of the Learning Period Affects the Performance of Random Gradient Selection Hyper-Heuristics. <i>Proceedings of the AAAI Conference on Artificial Intelligence</i> , 2020, 34, 2376-2383.	4.9	9
15	Do sophisticated evolutionary algorithms perform better than simple ones?. , 2020, , .		1
16	Runtime analysis of population-based evolutionary algorithms. , 2020, , .		0
17	On the Time Complexity of Algorithm Selection Hyper-Heuristics for Multimodal Optimisation. <i>Proceedings of the AAAI Conference on Artificial Intelligence</i> , 2019, 33, 2322-2329.	4.9	35
18	Runtime analysis of evolutionary algorithms: basic introduction. , 2019, , .		0

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19	On the benefits of populations for the exploitation speed of standard steady-state genetic algorithms. , 2019, , .		13
20	On inversely proportional hypermutations with mutation potential. , 2019, , .		4
21	On the impact of the cutoff time on the performance of algorithm configurators. , 2019, , .		7
22	Evolving boolean functions with conjunctions and disjunctions via genetic programming. , 2019, , .		2
23	On the benefits and risks of using fitness sharing for multimodal optimisation. Theoretical Computer Science, 2019, 773, 53-70.	0.9	25
24	Artificial immune systems can find arbitrarily good approximations for the NP-hard number partitioning problem. Artificial Intelligence, 2019, 274, 180-196.	5.8	25
25	On the Analysis of Trajectory-Based Search Algorithms: When is it Beneficial to Reject Improvements?. Algorithmica, 2019, 81, 858-885.	1.3	0
26	Escaping Local Optima Using Crossover With Emergent Diversity. IEEE Transactions on Evolutionary Computation, 2018, 22, 484-497.	10.0	118
27	How to Escape Local Optima in Black Box Optimisation: When Non-elitism Outperforms Elitism. Algorithmica, 2018, 80, 1604-1633.	1.3	23
28	Standard Steady State Genetic Algorithms Can Hillclimb Faster Than Mutation-Only Evolutionary Algorithms. IEEE Transactions on Evolutionary Computation, 2018, 22, 720-732.	10.0	96
29	On the runtime analysis of selection hyper-heuristics with adaptive learning periods. , 2018, , .		38
30	Theoretical Analysis of Stochastic Search Algorithms. , 2018, , 849-884.		4
31	Runtime analysis of evolutionary algorithms. , 2018, , .		0
32	Standard steady state genetic algorithms can hillclimb faster than evolutionary algorithms using standard bit mutation. , 2018, , .		7
33	Artificial Immune Systems Can Find Arbitrarily Good Approximations for the NP-Hard Partition Problem. Lecture Notes in Computer Science, 2018, , 16-28.	1.3	4
34	Fast Artificial Immune Systems. Lecture Notes in Computer Science, 2018, , 67-78.	1.3	20
35	Theoretical Analysis of Stochastic Search Algorithms. , 2018, , 1-36.		5
36	Runtime analysis of population-based evolutionary algorithms. , 2017, , .		1

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37	On Easiest Functions for Mutation Operators in Bio-Inspired Optimisation. <i>Algorithmica</i> , 2017, 78, 714-740.	1.3	17
38	On the runtime analysis of generalised selection hyper-heuristics for pseudo-boolean optimisation. , 2017, , .		27
39	On the runtime analysis of the opt-IA artificial immune system. , 2017, , .		24
40	When is it beneficial to reject improvements?. , 2017, , .		2
41	Runtime Analysis of Population-based Evolutionary Algorithms. , 2016, , .		1
42	On the Analysis of Simple Genetic Programming for Evolving Boolean Functions. <i>Lecture Notes in Computer Science</i> , 2016, , 99-114.	1.3	8
43	Tutorials at PPSN 2016. <i>Lecture Notes in Computer Science</i> , 2016, , 1012-1022.	1.3	0
44	Escaping Local Optima with Diversity Mechanisms and Crossover. , 2016, , .		47
45	Emergence of Diversity and Its Benefits for Crossover in Genetic Algorithms. <i>Lecture Notes in Computer Science</i> , 2016, , 890-900.	1.3	14
46	When Non-Elitism Outperforms Elitism for Crossing Fitness Valleys. , 2016, , .		6
47	Editorial for the Special Issue on Theory of Evolutionary Algorithms 2014. <i>Evolutionary Computation</i> , 2015, 23, 509-511.	3.0	0
48	Improved time complexity analysis of the Simple Genetic Algorithm. <i>Theoretical Computer Science</i> , 2015, 605, 21-41.	0.9	106
49	Runtime Analysis of Evolutionary Algorithms. , 2015, , .		0
50	On Easiest Functions for Somatic Contiguous Hypermutations And Standard Bit Mutations. , 2015, , .		5
51	Analysis of diversity mechanisms for optimisation in dynamic environments with low frequencies of change. <i>Theoretical Computer Science</i> , 2015, 561, 37-56.	0.9	21
52	On the runtime analysis of stochastic ageing mechanisms. , 2014, , .		16
53	Runtime analysis of evolutionary algorithms. , 2014, , .		0
54	On the runtime analysis of the Simple Genetic Algorithm. <i>Theoretical Computer Science</i> , 2014, 545, 2-19.	0.9	57

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55	On the Runtime Analysis of Fitness Sharing Mechanisms. Lecture Notes in Computer Science, 2014, , 932-941.	1.3	9
56	Improved runtime analysis of the simple genetic algorithm. , 2013, , .		3
57	Approximating vertex cover using edge-based representations. , 2013, , .		22
58	Analysis of diversity mechanisms for optimisation in dynamic environments with low frequencies of change. , 2013, , .		11
59	Runtime analysis of evolutionary algorithms. , 2013, , .		1
60	On the analysis of the simple genetic algorithm. , 2012, , .		9
61	Simplified Drift Analysis for Proving Lower Bounds in Evolutionary Computation. Algorithmica, 2011, 59, 369-386.	1.3	103
62	On the effectiveness of crossover for migration in parallel evolutionary algorithms. , 2011, , .		28
63	On the Analysis of the Immune-Inspired B-Cell Algorithm for the Vertex Cover Problem. Lecture Notes in Computer Science, 2011, , 117-131.	1.3	17
64	Ant colony optimization and the minimum cut problem. , 2010, , .		14
65	Fixed Parameter Evolutionary Algorithms and Maximum Leaf Spanning Trees: A Matter of Mutation. , 2010, , 204-213.		15
66	Theoretical analysis of rank-based mutation - combining exploration and exploitation. , 2009, , .		26
67	Analysis of Diversity-Preserving Mechanisms for Global Exploration. Evolutionary Computation, 2009, 17, 455-476.	3.0	83
68	Theoretical analysis of fitness-proportional selection. , 2009, , .		58
69	Analysis of the $(1+1)$ -EA for Finding Approximate Solutions to Vertex Cover Problems. IEEE Transactions on Evolutionary Computation, 2009, 13, 1006-1029.	10.0	82
70	Analysis of population-based evolutionary algorithms for the vertex cover problem. , 2008, , .		31
71	Theoretical analysis of diversity mechanisms for global exploration. , 2008, , .		25
72	Simplified Drift Analysis for Proving Lower Bounds in Evolutionary Computation. Lecture Notes in Computer Science, 2008, , 82-91.	1.3	23

#	ARTICLE	IF	CITATIONS
73	On the Convergence of Immune Algorithms. , 2007, , .		34
74	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
75	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