Xiaodong Li

List of Publications by Year
in descending order

170 papers	8,349 citations	126708 33 h-index	69108 77 g-index
174 all docs	174 docs citations	174 times ranked	4544 citing authors

#	Article	IF	Citations
1	Cooperative Co-Evolution With Differential Grouping for Large Scale Optimization. IEEE Transactions on Evolutionary Computation, 2014, 18, 378-393.	7.5	616
2	Cooperatively Coevolving Particle Swarms for Large Scale Optimization. IEEE Transactions on Evolutionary Computation, 2012, 16, 210-224.	7.5	578
3	Locating and tracking multiple dynamic optima by a particle swarm model using speciation. IEEE Transactions on Evolutionary Computation, 2006, 10, 440-458.	7.5	463
4	Binary dragonfly optimization for feature selection using time-varying transfer functions. Knowledge-Based Systems, 2018, 161, 185-204.	4.0	318
5	Niching Without Niching Parameters: Particle Swarm Optimization Using a Ring Topology. IEEE Transactions on Evolutionary Computation, 2010, 14, 150-169.	7.5	317
6	A Non-dominated Sorting Particle Swarm Optimizer for Multiobjective Optimization. Lecture Notes in Computer Science, 2003, , 37-48.	1.0	295
7	DG2: A Faster and More Accurate Differential Grouping for Large-Scale Black-Box Optimization. IEEE Transactions on Evolutionary Computation, 2017, 21, 929-942.	7.5	241
8	Swarm Intelligence in Optimization. Natural Computing Series, 2008, , 43-85.	2.2	238
9	Seeking Multiple Solutions: An Updated Survey on Niching Methods and Their Applications. IEEE Transactions on Evolutionary Computation, 2017, 21, 518-538.	7.5	210
10	Erratum to â€œNiching Without Niching Parameters: Particle Swarm Optimization Using a Ring Topologyâ€•[Feb 10 150-169. IEEE Transactions on Evolutionary Computation, 2010, 14, 665-665.	7.5	188
11	Cooperative Co-evolution with delta grouping for large scale non-separable function optimization. , 2010, , .		184
12	A Survey on Cooperative Co-Evolutionary Algorithms. IEEE Transactions on Evolutionary Computation, 2019, 23, 421-441.	7.5	177
13	A Competitive Divide-and-Conquer Algorithm for Unconstrained Large-Scale Black-Box Optimization. ACM Transactions on Mathematical Software, 2016, 42, 1-24.	1.6	172
14	Adaptively Choosing Neighbourhood Bests Using Species in a Particle Swarm Optimizer for Multimodal Function Optimization. Lecture Notes in Computer Science, 2004, , 105-116.	1.0	169
15	Efficient differential evolution using speciation for multimodal function optimization. , 2005, , .		156
16	Cooperative Co-evolution for large scale optimization through more frequent random grouping. , 2010, , .		154
17	A review of population initialization techniques for evolutionary algorithms. , 2014, , .		121
18	Time series forecasting by evolving artificial neural networks with genetic algorithms, differential evolution and estimation of distribution algorithm. Neural Computing and Applications, 2013, 22, 11-20.	3.2	117

#	Article	IF	Citations
19	A backtracking search hyper-heuristic for the distributed assembly flow-shop scheduling problem. Swarm and Evolutionary Computation, 2017, 36, 124-135.	4.5	116
20	Cooperative Coevolution With Route Distance Grouping for Large-Scale Capacitated Arc Routing Problems. IEEE Transactions on Evolutionary Computation, 2014, 18, 435-449.	7.5	105
21	Designing benchmark problems for large-scale continuous optimization. Information Sciences, 2015, 316, 419-436.	4.0	104
22	A Survey of Weight Vector Adjustment Methods for Decomposition-Based Multiobjective Evolutionary Algorithms. IEEE Transactions on Evolutionary Computation, 2020, 24, 634-649.	7.5	104
23	A novel scalable test problem suite for multimodal multiobjective optimization. Swarm and Evolutionary Computation, 2019, 48, 62-71.	4.5	103
24	Particle swarm with speciation and adaptation in a dynamic environment. , 2006, , .		98
25	An Analysis of the Inertia Weight Parameter for Binary Particle Swarm Optimization. IEEE Transactions on Evolutionary Computation, 2016, 20, 666-681.	7.5	97
26	Efficient Resource Allocation in Cooperative Co-Evolution for Large-Scale Global Optimization. IEEE Transactions on Evolutionary Computation, 2017, 21, 493-505.	7.5	92
27	A framework for generating tunable test functions for multimodal optimization. Soft Computing, 2011, 15, 1689-1706.	2.1	90
28	Particle Swarms for Dynamic Optimization Problems. Natural Computing Series, 2008, , 193-217.	2.2	90
29	Tackling high dimensional nonseparable optimization problems by cooperatively coevolving particle swarms. , 2009, , .		87
30	A particle swarm model for tracking multiple peaks in a dynamic environment using speciation. , 0, , .		86
31	A multimodal particle swarm optimizer based on fitness Euclidean-distance ratio. , 2007, , .		82
32	Smart use of computational resources based on contribution for cooperative co-evolutionary algorithms. , 2011, , .		81
33	A decomposition based memetic algorithm for multi-objective vehicle routing problem with time windows. Computers and Operations Research, 2015, 62, 61-77.	2.4	78
34	A time-varying transfer function for balancing the exploration and exploitation ability of a binary PSO. Applied Soft Computing Journal, 2017, 59, 182-196.	4.1	72
35	Better Spread and Convergence: Particle Swarm Multiobjective Optimization Using the Maximin Fitness Function. Lecture Notes in Computer Science, 2004, , 117-128.	1.0	69
36	Adaptively choosing niching parameters in a PSO. , 2006, , .		60

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37	A Cooperative Coevolutionary Multiobjective Algorithm Using Non-dominated Sorting. Lecture Notes in Computer Science, 2004, , 537-548.	1.0	60
38	A Real-Coded Predator-Prey Genetic Algorithm for Multiobjective Optimization. Lecture Notes in Computer Science, 2003, , 207-221.	1.0	59
39	A dynamic archive niching differential evolution algorithm for multimodal optimization. , 2013, , .		58
40	An analysis of the velocity updating rule of the particle swarm optimization algorithm. Journal of Heuristics, 2014, 20, 417-452.	1.1	51
41	Decomposition for Large-scale Optimization Problems with Overlapping Components. , 2019, , .		50
42	Particle swarm optimization. , 2007, , .		45
43	On investigation of interdependence between sub-problems of the Travelling Thief Problem. Soft Computing, 2016, 20, 157-172.	2.1	44
44	A new performance metric for user-preference based multi-objective evolutionary algorithms. , 2013, , .		43
45	Effective decomposition of large-scale separable continuous functions for cooperative co-evolutionary algorithms. , 2014, , .		43
46	A Scalable Approach to Capacitated Arc Routing Problems Based on Hierarchical Decomposition. IEEE Transactions on Cybernetics, 2017, 47, 3928-3940.	6.2	43
47	Designing airfoils using a reference point based evolutionary many-objective particle swarm optimization algorithm. , 2010, , .		42
48	CBCC3 â€" A contribution-based cooperative co-evolutionary algorithm with improved exploration/exploitation balance. , 2016, , .		40
49	Monte Carlo tree search based algorithms for dynamic difficulty adjustment. , 2017, , .		40
50	Self-adaptive multi-objective evolutionary algorithm based on decomposition for large-scale problems: A case study on reservoir flood control operation. Information Sciences, 2016, 367-368, 529-549.	4.0	39
51	Adaptive threshold parameter estimation with recursive differential grouping for problem decomposition. , 2018, , .		39
52	Using regression to improve local convergence. , 2007, , .		38
53	Initialization methods for large scale global optimization. , 2013, , .		37
54	Cooperative Coevolution with Formula-Based Variable Grouping for Large-Scale Global Optimization. Evolutionary Computation, 2018, 26, 569-596.	2.3	37

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55	User-preference based decomposition in MOEA/D without using an ideal point. Swarm and Evolutionary Computation, 2019, 44, 597-611.	4.5	36
56	Efficient meta-heuristics for the Multi-Objective Time-Dependent Orienteering Problem. European Journal of Operational Research, 2016, 254, 443-457.	3.5	35
57	Reference point based multi-objective optimization through decomposition. , 2012, , .		33
58	Multi-objective optimization for designing of high-speed train cabin ventilation system using particle swarm optimization and multi-fidelity Kriging. Building and Environment, 2019, 155, 161-174.	3.0	33
59	Improving Efficiency of Heuristics for the Large Scale Traveling Thief Problem. Lecture Notes in Computer Science, 2014, , 631-643.	1.0	32
60	Integrating user preferences with particle swarms for multi-objective optimization. , 2008, , .		29
61	Effects of population initialization on differential evolution for large scale optimization. , 2014, , .		29
62	Multi-objective Techniques in Genetic Programming for Evolving Classifiers. , 0, , .		28
63	Differential evolution on the CEC-2013 single-objective continuous optimization testbed. , 2013, , .		27
64	Integrating user preferences and decomposition methods for many-objective optimization. , 2014, , .		27
65	Evolutionary algorithms and multi-objectivization for the travelling salesman problem. , 2009, , .		25
66	Using a distance metric to guide PSO algorithms for many-objective optimization. , 2009, , .		25
67	Comparing particle swarms for tracking extrema in dynamic environments. , 0, , .		23
68	A two phase hybrid algorithm with a new decomposition method for large scale optimization. Integrated Computer-Aided Engineering, 2018, 25, 349-367.	2.5	23
69	Reservoir flood control operation using multi-objective evolutionary algorithm with decomposition and preferences. Applied Soft Computing Journal, 2017, 50, 21-33.	4.1	21
70	Enhancing the robustness of a speciation-based PSO. , 0, , .		20
71	A sensitivity analysis of contribution-based cooperative co-evolutionary algorithms. , 2015, , .		20
72	Enhanced Multifactorial Evolutionary Algorithm With Meme Helper-Tasks. IEEE Transactions on Cybernetics, 2022, 52, 7837-7851.	6.2	20

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73	Heuristic evolution with genetic programming for traveling thief problem. , 2015, , .		19
74	A multi-objective constraint-handling method with PSO algorithm for constrained engineering optimization problems. , 2008, , .		18
75	A genetic programming-based hyper-heuristic approach for storage location assignment problem. , 2014, , .		18
76	Bandit-based cooperative coevolution for tackling contribution imbalance in large-scale optimization problems. Applied Soft Computing Journal, 2019, 76, 265-281.	4.1	18
77	Player-Computer Interaction Features for Designing Digital Play Experiences across Six Degrees of Water Contact. , 2015, , .		18
78	Swarm Intelligence. Profiles in Operations Research, 2019, , 353-384.	0.3	17
79	Rotated test problems for assessing the performance of multi-objective optimization algorithms. , 2006, , .		16
80	Time series forecasting by evolving artificial neural networks using genetic algorithms and differential evolution. , 2010, , .		16
81	Multi-objective optimization of HVAC system using NSPSO and Kriging algorithms—A case study. Building Simulation, 2017, 10, 769-781.	3.0	16
82	A hybrid multiobjective GRASP for a multi-row facility layout problem with extra clearances. International Journal of Production Research, 2022, 60, 957-976.	4.9	16
83	A Generator for Multimodal Test Functions with Multiple Global Optima. Lecture Notes in Computer Science, 2008, , 239-248.	1.0	16
84	A comprehensive preference-based optimization framework with application to high-lift aerodynamic design. Engineering Optimization, 2012, 44, 1209-1227.	1.5	15
85	Generalization of machine learning for problem reduction: a case study on travelling salesman problems. OR Spectrum, 2021, 43, 607-633.	2.1	15
86	Reference Point-Based Particle Swarm Optimization Using a Steady-State Approach. Lecture Notes in Computer Science, 2008, , 200-209.	1.0	15
87	Choosing Leaders for Multi-objective PSO Algorithms Using Differential Evolution. Lecture Notes in Computer Science, 2008, , 249-258.	1.0	15
88	Comparing lbest PSO niching algorithms using different position update rules. , 2010, , .		14
89	Decomposing Large-Scale Capacitated Arc Routing Problems using a random route grouping method. , 2013, , .		14
90	A novel hybridization of opposition-based learning and cooperative co-evolutionary for large-scale optimization. , 2014, , .		14

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91	Using Statistical Measures and Machine Learning for Graph Reduction to Solve Maximum Weight Clique Problems. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2021, 43, 1746-1760.	9.7	14
92	A Comparative Study of CMA-ES on Large Scale Global Optimisation. Lecture Notes in Computer Science, 2010, , 303-312.	1.0	14
93	Parameter Control within a Co-operative Co-evolutionary Genetic Algorithm. Lecture Notes in Computer Science, 2002, , 247-256.	1.0	13
94	Merged Differential Grouping for Large-Scale Global Optimization. IEEE Transactions on Evolutionary Computation, 2022, 26, 1439-1451.	7.5	13
95	Symbol detection in spatial multiplexing system using particle swarm optimization metaâ€heuristics. International Journal of Communication Systems, 2008, 21, 1239-1257.	1.6	12
96	Sensitivity analysis of Penalty-based Boundary Intersection on aggregation-based EMO algorithms. , 2015, , .		12
97	ROTATED PROBLEMS AND ROTATIONALLY INVARIANT CROSSOVER IN EVOLUTIONARY MULTI-OBJECTIVE OPTIMIZATION. International Journal of Computational Intelligence and Applications, 2008, 07, 149-186.	0.6	11
98	Swarm Heuristic for Identifying Preferred Solutions in Surrogate-Based Multi-Objective Engineering Design. AIAA Journal, 2011, 49, 1437-1449.	1.5	11
99	Variable neighborhood decomposition for Large Scale Capacitated Arc Routing Problem. , 2014, , .		11
100	A Distance Metric for Evolutionary Many-Objective Optimization Algorithms Using User-Preferences. Lecture Notes in Computer Science, 2009, , 443-453.	1.0	10
101	Evolving patch-based terrains for use in video games. , 2011, , .		10
102	Learning a Super Mario controller from examples of human play. , 2014, , .		10
103	Integrated Approach to Personalized Procedural Map Generation Using Evolutionary Algorithms. IEEE Transactions on Games, 2015, 7, 139-155.	1.7	10
104	Challenging AI. , 2019, , .		10
105	Multiobjective parsimony enforcement for superior generalisation performance. , 0, , .		9
106	Informative performance metrics for dynamic optimisation problems. , 2007, , .		9
107	A survey of procedural terrain generation techniques using evolutionary algorithms. , 2012, , .		9
108	Neuroevolution of content layout in the PCG: Angry bots video game. , 2013, , .		9

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109	An improved performance metric for multiobjective evolutionary algorithms with user preferences. , 2015, , .		9
110	Nature-Inspired Algorithms for Real-World Optimization Problems. Journal of Applied Mathematics, 2015, 2015, 1-2.	0.4	9
111	Cooperative co-evolution with online optimizer selection for large-scale optimization. , 2018, , .		9
112	Improving Local Convergence in Particle Swarms by Fitness Approximation Using Regression. Adaptation, Learning, and Optimization, 2010, , 265-293.	0.5	9
113	Boosting ant colony optimization via solution prediction and machine learning. Computers and Operations Research, 2022, 143, 105769.	2.4	9
114	Integrating User-Preference Swarm Algorithm and Surrogate Modeling for Airfoil Design. , 2011, , .		8
115	Decomposition and cooperative coevolution techniques for large scale global optimization. , 2014, , .		8
116	Evolutionary large-scale global optimization. , 2017, , .		8
117	Multimodal truss structure design using bilevel and niching based evolutionary algorithms. , 2017, , .		8
118	Why Advanced Population Initialization Techniques Perform Poorly in High Dimension?. Lecture Notes in Computer Science, 2014, , 479-490.	1.0	8
119	The effects of varying population density in a fine-grained parallel genetic algorithm. , 0, , .		7
120	Editorial Special Issue: Swarm Intelligence. IEEE Transactions on Evolutionary Computation, 2009, 13, 677-680.	7.5	7
121	Improving the performance and scalability of Differential Evolution on problems exhibiting parameter interactions. Soft Computing, 2011, 15, 1769-1792.	2.1	7
122	Particle Swarm Optimizer with Aging Operator for Multimodal Function Optimization. International Journal of Computational Intelligence Systems, 2013, 6, 862-880.	1.6	7
123	Investigation of self-adaptive differential evolution on the CEC-2013 real-parameter single-objective optimization testbed. , 2013, , .		7
124	Measuring player skill using dynamic difficulty adjustment. , 2018, , .		7
125	On performance metrics and particle swarm methods for dynamic multiobjective optimization problems. , 2007, , .		6
126	Benchmarks for the Coal Processing and Blending Problem. , 2016, , .		6

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127	Towards solving large-scale precedence constrained production scheduling problems in mining. , 2017, , .		6
128	Enhancing robustness of the inverted PBI scalarizing method in MOEA/D. Applied Soft Computing Journal, 2018, 71, 1117-1132.	4.1	6
129	A genetic algorithm with local search for solving single-source single-sink nonlinear non-convex minimum cost flow problems. Soft Computing, 2020, 24, 1153-1169.	2.1	6
130	A Modified PSO Algorithm for Constrained Multi-objective Optimization. , 2009, , .		5
131	A merge search algorithm and its application to the constrained pit problem in mining. , 2018, , .		5
132	Scaling Up Solutions to Storage Location Assignment Problems by Genetic Programming. Lecture Notes in Computer Science, 2014, , 691-702.	1.0	5
133	An Evolutionary Multi-criteria Journey Planning Algorithm for Multimodal Transportation Networks. Lecture Notes in Computer Science, 2017, , 144-156.	1.0	5
134	A Study on Pre-training Deep Neural Networks Using Particle Swarm Optimisation. Lecture Notes in Computer Science, 2017, , 361-372.	1.0	5
135	Improving the Performance and Scalability of Differential Evolution. Lecture Notes in Computer Science, 2008, , 131-140.	1.0	5
136	Power generation loading optimization using a multi-objective constraint-handling method via PSO algorithm. , 2008, , .		4
137	Enhancing theme park experiences through adaptive cyber-physical play. , 2015, , .		4
138	Preference-Based Multiobjective Particle Swarm Optimization for Airfoil Design. , 2015, , 1311-1331.		3
139	An Adaptive Training Framework for Increasing Player Proficiency in Games and Simulations. , 2016, , .		3
140	Differential Evolution Based Hyper-heuristic for the Flexible Job-Shop Scheduling Problem with Fuzzy Processing Time. Lecture Notes in Computer Science, 2017, , 75-86.	1.0	3
141	Pattern recognition by an optical thin-film multilayer model. Annals of Mathematics and Artificial Intelligence, 1999, 26, 193-213.	0.9	2
142	CRITICAL DENSITY IN A FIRE SPREAD MODEL UNDER ENVIRONMENTAL INFLUENCE. International Journal of Computational Intelligence and Applications, 2003, 03, 145-155.	0.6	2
143	A Delaunay Triangulation Based Density Measurement for Evolutionary Multi-objective Optimization. Lecture Notes in Computer Science, 2016, , 183-192.	1.0	2
144	Surrogate-Assisted Multi-swarm Particle Swarm Optimization of Morphing Airfoils. Lecture Notes in Computer Science, 2017, , 124-133.	1.0	2

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145	Estimating Passenger Preferences Using Implicit Relevance Feedback for Personalized Journey Planning. Lecture Notes in Computer Science, 2017, , 157-168.	1.0	2
146	Interactive multiobjective optimisation. , 2018, , .		2
147	An improved merge search algorithm for the constrained pit problem in open-pit mining. , 2019, , .		2
148	A Probabilistic Tree-Based Representation for Non-convex Minimum Cost Flow Problems. Lecture Notes in Computer Science, 2018, , 69-81.	1.0	2
149	A REAL-CODED CELLULAR GENETIC ALGORITHM INSPIRED BY PREDATOR-PREY INTERACTIONS. Advances in Natural Computation, 2004, , 191-207.	0.1	2
150	NSGA-II for Solving Multiobjective Integer Minimum Cost Flow Problem with Probabilistic Tree-Based Representation. Lecture Notes in Computer Science, 2019, , 541-552.	1.0	2
151	Connectionist learning: A comparison of neural networks and an optical thin-film multilayer model. Connection Science, 2002, 14, 49-63.	1.8	1
152	Reinforcement learning to control a commander for capture the flag. , 2014, , .		1
153	A Two Phase Approach Based on Dynamic Variable Grouping and Self-Adaptive Group Search for Large Scale Optimization. , 2016, , .		1
154	An Evolutionary Approach for Learning Conditional Preference Networks from Inconsistent Examples. Lecture Notes in Computer Science, 2017, , 502-515.	1.0	1
155	Preliminary Study on Solving Coal Processing and Blending Problems Using Lexicographic Ordering. Lecture Notes in Computer Science, 2017, , 221-233.	1.0	1
156	Comparison of neural networks and an optical thin-film multilayer model for connectionist learning. , 0, , .		0
157	Critical dynamics in evolutionary algorithms. , 0, , .		0
158	Theoretical foundations of evolutionary computation. Genetic Programming and Evolvable Machines, 2008, 9, 107-108.	1.5	0
159	Special issue on simulated evolution and learning. Evolutionary Intelligence, 2009, 2, 149-150.	2.3	0
160	Guest Editorial: special issue on evolutionary optimisation and learning. Soft Computing, 2011, 15, 1671-1673.	2.1	0
161	A dynamic neighbourhood particle swarm optimisation algorithm for constrained optimisation. , 2011, , .		0
162	Selected Papers from the Ninth International Conference on Computational Intelligence and Security. Scientific World Journal, The, 2013, 2013, 1-2.	0.8	0

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163	Combining Monte Carlo tree search and apprenticeship learning for capture the flag. , 2015, , .		0
164	Extending the Delaunay Triangulation Based Density Measurement to Many-Objective Optimization. Lecture Notes in Computer Science, 2017, , 3-11.	1.0	0
165	Conditional Preference Learning for Personalized and Context-Aware Journey Planning. Lecture Notes in Computer Science, 2018, , 451-463.	1.0	0
166	Novelty particle swarm optimisation for truss optimisation problems. , 2021, , .		0
167	A tri-objective preference-based uniform weight design method using Delaunay triangulation. Soft Computing, 2021, 25, 9703-9729.	2.1	0
168	A speciation-based bilevel niching method for multimodal truss design problems. Journal of Combinatorial Optimization, 0, , 1.	0.8	0
169	Automatic decomposition of mixed integer programs for lagrangian relaxation using a multiobjective approach. , 2020, , .		0
170	Finding Representative Solutions in Multimodal Optimization for Enhanced Decision-Making. Natural Computing Series, 2021, , 57-88.	2.2	0