Christian Blum

List of Publications by Year
in descending order

174 papers	9,542 citations	218381 26 h-index	39575 94 g-index
197 all docs	197 docs citations	197 times ranked	6859 citing authors

#	ARTICLE	IF	CITATIONS
1	Optimization Techniques and Formal Verification for the Software Design of Boolean Algebra Based Safety-Critical Systems. IEEE Transactions on Industrial Informatics, 2022, 18, 620-630.	7.2	3
2	Variable Neighborhood Search for the Two-Echelon Electric Vehicle Routing Problem with Time Windows. Applied Sciences (Switzerland), 2022, 12, 1014.	1.3	7
3	A Population-Based Iterated Greedy Algorithm for Maximizing Sensor Network Lifetime. Sensors, 2022, 22, 1804.	2.1	3
4	Graph search and variable neighborhood search for finding constrained longest common subsequences in artificial and real gene sequences. Applied Soft Computing Journal, 2022, 122, 108844.	4.1	2
5	A Self-Adaptive Variant of CMSA: Application to the Minimum Positive Influence Dominating Set Problem. International Journal of Computational Intelligence Systems, 2022, 15, .	1.6	3
6	Negative learning Ant colony optimization for network alignment. , 2022, , .		0
7	A biased random key genetic algorithm applied to target set selection in viral marketing. , 2022, , .		0
8	A comparative analysis of two matheuristics by means of merged local optima networks. European Journal of Operational Research, 2021, 290, 36-56.	3.5	5
9	Solving longest common subsequence problems via a transformation to the maximum clique problem. Computers and Operations Research, 2021, 125, 105089.	2.4	14
10	An AâŽ search algorithm for the constrained longest common subsequence problem. Information Processing Letters, 2021, 166, 106041.	0.4	4
11	A Computational Approach to Quantify the Benefits of Ridesharing for Policy Makers and Travellers. IEEE Transactions on Intelligent Transportation Systems, 2021, 22, 119-130.	4.7	13
12	Adding Negative Learning to Ant Colony Optimization: A Comprehensive Study. Mathematics, 2021, 9, 361.	1.1	16
13	An Improved Greedy Heuristic for the Minimum Positive Influence Dominating Set Problem in Social Networks. Algorithms, 2021, 14, 79.	1.2	12
14	Negative Learning in Ant Colony Optimization: Application to the Multi Dimensional Knapsack Problem. , 2021, , .		1
15	A Greedy Heuristic for Maximizing the Lifetime of Wireless Sensor Networks Based on Disjoint Weighted Dominating Sets. Algorithms, 2021, 14, 170.	1.2	5
16	Solving the Longest Common Subsequence Problem Concerning Non-Uniform Distributions of Letters in Input Strings. Mathematics, 2021, 9, 1515.	1.1	5
17	Negative learning ant colony optimization for the minimum positive influence dominating set problem. , 2021, , .		2
18	Search trajectory networks: A tool for analysing and visualising the behaviour of metaheuristics. Applied Soft Computing Journal, 2021, 109, 107492.	4.1	37

#	Article	IF	Citations
19	ANTS 2020 Special Issue: Editorial. Swarm Intelligence, 2021, 15, 311-313.	1.3	0
20	Minimum common string partition: on solving large‐scale problem instances. International Transactions in Operational Research, 2020, 27, 91-111.	1.8	3
21	Anytime algorithms for the longest common palindromic subsequence problem. Computers and Operations Research, 2020, 114, 104827.	2.4	6
22	Finding Longest Common Subsequences: New anytime A* search results. Applied Soft Computing Journal, 2020, 95, 106499.	4.1	13
23	Barrakuda: A Hybrid Evolutionary Algorithm for Minimum Capacitated Dominating Set Problem. Mathematics, 2020, 8, 1858.	1.1	4
24	Solution Merging in Matheuristics for Resource Constrained Job Scheduling. Algorithms, 2020, 13, 256.	1.2	13
25	A new optimization model for wastewater treatment planning with a temporal component. Chemical Engineering Research and Design, 2020, 136, 157-168.	2.7	2
26	Search Trajectory Networks of Population-Based Algorithms in Continuous Spaces. Lecture Notes in Computer Science, 2020, , 70-85.	1.0	20
27	NuCDS: An Efficient Local Search Algorithm for Minimum Connected Dominating Set. , 2020, , .		3
28	On Solving a Generalized Constrained Longest Common Subsequence Problem. Lecture Notes in Computer Science, 2020, , 55-70.	1.0	3
29	A New Approach for Making Use of Negative Learning in Ant Colony Optimization. Lecture Notes in Computer Science, 2020, , 16-28.	1.0	3
30	Route planning for cooperative air-ground robots with fuel constraints. , 2019, , .		4
31	Application of CMSA to the minimum capacitated dominating set problem. , 2019, , .		11
32	A biased random key genetic algorithm for the weighted independent domination problem. , 2019, , .		1
33	Job sequencing with one common and multiple secondary resources: An A⋆/Beam Search based anytime algorithm. Artificial Intelligence, 2019, 277, 103173.	3.9	1
34	ANTS 2018 special issue: Editorial. Swarm Intelligence, 2019, 13, 169-172.	1.3	0
35	An algorithm based on ant colony optimization for the minimum connected dominating set problem. Applied Soft Computing Journal, 2019, 80, 672-686.	4.1	32
36	Synergistic team composition: A computational approach to foster diversity in teams. Knowledge-Based Systems, 2019, 182, 104799.	4.0	17

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37	Exact and Heuristic Approaches for the Longest Common Palindromic Subsequence Problem. Lecture Notes in Computer Science, 2019, , 199-214.	1.0	0
38	Maximising the Net Present Value of Project Schedules Using CMSA and Parallel ACO. Lecture Notes in Computer Science, 2019, , 16-30.	1.0	6
39	Metaheuristic Hybrids. Profiles in Operations Research, 2019, , 385-417.	0.3	8
40	A Beam Search for the Longest Common Subsequence Problem Guided by a Novel Approximate Expected Length Calculation. Lecture Notes in Computer Science, 2019, , 154-167.	1.0	9
41	Generic CP-Supported CMSA for Binary Integer Linear Programs. Lecture Notes in Computer Science, 2019, , 1-15.	1.0	0
42	A Biased Random Key Genetic Algorithm with Rollout Evaluations for the Resource Constraint Job Scheduling Problem. Lecture Notes in Computer Science, 2019, , 549-560.	1.0	5
43	A comprehensive comparison of metaheuristics for the repetition-free longest common subsequence problem. Journal of Heuristics, 2018, 24, 551-579.	1.1	11
44	Hybrid techniques based on solving reduced problem instances for a longest common subsequence problem. Applied Soft Computing Journal, 2018, 62, 15-28.	4.1	9
45	The weighted independent domination problem: Integer linear programming models and metaheuristic approaches. European Journal of Operational Research, 2018, 265, 860-871.	3.5	10
46	ILP-Based Reduced Variable Neighborhood Search for Large-Scale Minimum Common String Partition. Electronic Notes in Discrete Mathematics, 2018, 66, 15-22.	0.4	1
47	Heterogeneous Teams for Homogeneous Performance. Lecture Notes in Computer Science, 2018, , 89-105.	1.0	0
48	Selected String Problems. , 2018, , 1221-1240.		0
49	Job Sequencing with One Common and Multiple Secondary Resources: A Problem Motivated from Particle Therapy for Cancer Treatment. Lecture Notes in Computer Science, 2018, , 506-518.	1.0	4
50	The Weighted Independent Domination Problem: ILP Model and Algorithmic Approaches. Lecture Notes in Computer Science, 2017, , 201-214.	1.0	2
51	Mining k-reachable sets in real-world networks using domination in shortcut graphs. Journal of Computational Science, 2017, 22, 1-14.	1.5	4
52	A hybrid evolutionary algorithm based on solution merging for the longest arc-preserving common subsequence problem. , 2017, , .		3
53	On solving large-scale instances of the knapsack problem with setup by means of an iterated greedy algorithm. , 2017, , .		4
54	Large neighborhood search for the most strings with few bad columns problem. Soft Computing, 2017, 21, 4901-4915.	2.1	5

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55	Construct, Merge, Solve and Adapt Versus Large Neighborhood Search for Solving the Multi-dimensional Knapsack Problem: Which One Works Better When?. Lecture Notes in Computer Science, 2017, , 60-74.	1.0	3
56	Editorial for the Special Issue on Combinatorial Optimization Problems. Evolutionary Computation, 2016, 24, 573-575.	2.3	0
57	Hybrid Metaheuristics. The Artificial Intelligence: Foundationsory, and Algorithms, 2016, , .	0.2	16
58	Incomplete Solution Representations and Decoders. The Artificial Intelligence: Foundationsory, and Algorithms, 2016, , 27-44.	0.2	0
59	Hybridization Based on Large Neighborhood Search. The Artificial Intelligence: Foundationsory, and Algorithms, 2016, , 63-82.	0.2	1
60	Making Use of a Parallel, Non-independent, Construction of SolutionsWithin Metaheuristics. The Artificial Intelligence: Foundationsory, and Algorithms, 2016, , 83-99.	0.2	0
61	Construct, Merge, Solve and Adapt: Application to the Repetition-Free Longest Common Subsequence Problem. Lecture Notes in Computer Science, 2016, , 46-57.	1.0	12
62	Extension of the CMSA Algorithm. , 2016, , .		3
63	Computational performance evaluation of two integer linear programming models for the minimum common string partition problem. Optimization Letters, 2016, 10, 189-205.	0.9	5
64	Construct, Merge, Solve & Adapt A new general algorithm for combinatorial optimization. Computers and Operations Research, 2016, 68, 75-88.	2.4	67
65	A hybrid algorithmic model for the minimum weight dominating set problem. Simulation Modelling Practice and Theory, 2016, 64, 57-68.	2.2	21
66	Construct, Merge, Solve and Adapt: Application to Unbalanced Minimum Common String Partition. Lecture Notes in Computer Science, 2016, , 17-31.	1.0	5
67	The Workshops at PPSN 2016. Lecture Notes in Computer Science, 2016, , 1007-1011.	1.0	0
68	A matheuristic for the minimum weight rooted arborescence problem. Journal of Heuristics, 2015, 21, 479-499.	1.1	8
69	Ant Colony Optimization for the Minimum-Weight Rooted Arborescence Problem. , 2015, , 1333-1343.		0
70	Swarm Intelligence in Optimization and Robotics. , 2015, , 1291-1309.		18
71	On solving the most strings with few bad columns problem: An ILP model and heuristics. , 2015, , .		3
72	Mathematical programming strategies for solving the minimum common string partition problem. European Journal of Operational Research, 2015, 242, 769-777.	3.5	14

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73	FrogCOL and FrogMIS: new decentralized algorithms for finding large independent sets in graphs. Swarm Intelligence, 2015, 9, 205-227.	1.3	6
74	An Artificial Bioindicator System for Network Intrusion Detection. Artificial Life, 2015, 21, 93-118.	1.0	6
75	The firefighter problem: Empirical results on random graphs. Computers and Operations Research, 2015, 60, 55-66.	2.4	16
76	A randomized population-based iterated greedy algorithm for the minimum weight dominating set problem. , 2015, , .		3
77	The Firefighter Problem: Application of Hybrid Ant Colony Optimization Algorithms. Lecture Notes in Computer Science, 2014, , 218-229.	1.0	8
78	A Hybrid Ant Colony Optimization Algorithm for the Far From Most String Problem. Lecture Notes in Computer Science, 2014, , 1-12.	1.0	6
79	FrogSim: distributed graph coloring in wireless ad hoc networks. Telecommunication Systems, 2014, 55, 211-223.	1.6	13
80	Iterative Probabilistic Tree Search for the Minimum Common String Partition Problem. Lecture Notes in Computer Science, 2014, , 145-154.	1.0	10
81	Can Frogs Find Large Independent Sets in a Decentralized Way? Yes They Can!. Lecture Notes in Computer Science, 2014, , 74-85.	1.0	1
82	Beam-ACO for the Repetition-Free Longest Common Subsequence Problem. Lecture Notes in Computer Science, 2014, , 79-90.	1.0	7
83	Learning Maximum Weighted (k+1)-Order Decomposable Graphs by Integer Linear Programming. Lecture Notes in Computer Science, 2014, , 396-408.	1.0	0
84	ANTS 2012 special issue. Swarm Intelligence, 2013, 7, 79-81.	1.3	0
85	Solving the 2D Bin Packing Problem by Means of a Hybrid Evolutionary Algorithm. Procedia Computer Science, 2013, 18, 899-908.	1.2	23
86	The travelling salesman problem with time windows: Adapting algorithms from travel-time to makespan optimization. Applied Soft Computing Journal, 2013, 13, 3806-3815.	4.1	82
87	An iterated greedy algorithm for the large-scale unrelated parallel machines scheduling problem. Computers and Operations Research, 2013, 40, 1829-1841.	2.4	66
88	Large neighbourhood search applied to the efficient solution of spatially explicit strategic supply chain management problems. Computers and Chemical Engineering, 2013, 49, 114-126.	2.0	17
89	Application of Large Neighborhood Search to Strategic Supply Chain Management in the Chemical Industry. Studies in Computational Intelligence, 2013, , 335-352.	0.7	1
90	Hybrid Metaheuristics in Combinatorial Optimization: A Tutorial. Lecture Notes in Computer Science, 2012, , 1-10.	1.0	7

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91	An Artificial Bee Colony Algorithm for the Unrelated Parallel Machines Scheduling Problem. Lecture Notes in Computer Science, 2012, , 143-152.	1.0	20
92	Hybrid Algorithms for the Minimum-Weight Rooted Arborescence Problem. Lecture Notes in Computer Science, 2012, , 61-72.	1.0	2
93	GRASP with path-relinking for the non-identical parallel machine scheduling problem with minimising total weighted completion times. Annals of Operations Research, 2012, 201, 383-401.	2.6	18
94	Distributed ant colony optimization for minimum energy broadcasting in sensor networks with realistic antennas. Computers and Mathematics With Applications, 2012, 64, 3683-3700.	1.4	5
95	Iterated Greedy Algorithms for the Maximal Covering Location Problem. Lecture Notes in Computer Science, 2012, , 172-181.	1.0	4
96	Distributed graph coloring: an approach based on the calling behavior of Japanese tree frogs. Swarm Intelligence, 2012, 6, 117-150.	1.3	46
97	A population-based iterated greedy algorithm for the minimum weight vertex cover problem. Applied Soft Computing Journal, 2012, 12, 1632-1639.	4.1	65
98	Variable neighbourhood search for the variable sized bin packing problem. Computers and Operations Research, 2012, 39, 1097-1108.	2.4	37
99	Large neighbourhood search algorithms for the founder sequence reconstruction problem. Computers and Operations Research, 2012, 39, 213-224.	2.4	8
100	Evolutionary Optimization. , 2012, , 1-29.		16
101	Ant colony optimization. , 2011, , .		0
102	FlockOpt: A new swarm optimization algorithm based on collective behavior of starling birds. , 2011, , .		7
103	Minimum energy broadcasting in wireless sensor networks: An ant colony optimization approach for a realistic antenna model. Applied Soft Computing Journal, 2011, 11, 5684-5694.	4.1	21
104	Distributed graph coloring in wireless ad hoc networks: A light-weight algorithm based on Japanese tree frogs' calling behaviour. , 2011, , .		9
105	Guest editorial: Special issue based on the LION 4 conference. Annals of Mathematics and Artificial Intelligence, 2011, 61, 47-48.	0.9	0
106	Hybrid metaheuristics in combinatorial optimization: A survey. Applied Soft Computing Journal, 2011, 11, 4135-4151.	4.1	611
107	Automated Reconstruction of Dendritic and Axonal Trees by Global Optimization with Geometric Priors. Neuroinformatics, 2011, 9, 279-302.	1.5	119
108	On solving the assembly line worker assignment and balancing problem via beam search. Computers and Operations Research, 2011, 38, 328-339.	2.4	86

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109	Implementing a model of Japanese tree frogs' calling behavior in sensor networks. , 2011, , .		4
110	Foundations of ANTCYCLE: Self-synchronized Duty-cycling in Mobile Sensor Networks. Computer Journal, 2011, 54, 1427-1448.	1.5	0
111	Solving the Two-Dimensional Bin Packing Problem with a Probabilistic Multi-start Heuristic. Lecture Notes in Computer Science, 2011, , 76-90.	1.0	2
112	Hybrid Metaheuristics. Computers and Operations Research, 2010, 37, 430-431.	2.4	14
113	Beam-ACO for the travelling salesman problem with time windows. Computers and Operations Research, 2010, 37, 1570-1583.	2.4	106
114	On the use of different types of knowledge in metaheuristics based on constructing solutions. Engineering Applications of Artificial Intelligence, 2010, 23, 650-659.	4.3	7
115	Hybrid Algorithms for the Variable Sized Bin Packing Problem. Lecture Notes in Computer Science, 2010, , 16-30.	1.0	2
116	Metaheuristic Hybrids. Profiles in Operations Research, 2010, , 469-496.	0.3	19
117	A Protocol for Self-Synchronized Duty-Cycling in Sensor Networks: Generic Implementation in Wiselib. , 2010, , .		2
118	Beam-ACO for the longest common subsequence problem. , 2010, , .		7
119	Reconstructing Geometrically Consistent Tree Structures from Noisy Images. Lecture Notes in Computer Science, 2010, 13, 291-299.	1.0	5
120	A Hybrid Metaheuristic for the Longest Common Subsequence Problem. Lecture Notes in Computer Science, 2010, , 1-15.	1.0	3
121	A Randomized Iterated Greedy Algorithm for the Founder Sequence Reconstruction Problem. Lecture Notes in Computer Science, 2010, , 37-51.	1.0	3
122	Asynchronous simulation of a self-synchronized duty-cycling mechanism for mobile sensor networks. , 2009, , .		1
123	Self-synchronized duty-cycling in sensor networks with energy harvesting capabilities. , 2009, , .		2
124	Ant colony optimization for multicasting in static wireless ad-hoc networks. Swarm Intelligence, 2009, 3, 125-148.	1.3	19
125	Beam search for the longest common subsequence problem. Computers and Operations Research, 2009, 36, 3178-3186.	2.4	54
126	Self-synchronized duty-cycling for mobile sensor networks with energy harvesting capabilities: A swarm intelligence study. , 2009, , .		10

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127	Hybridizing Beam-ACO with Constraint Programming for Single Machine Job Scheduling. Lecture Notes in Computer Science, 2009, , 30-44.	1.0	13
128	Beam-ACO Based on Stochastic Sampling: A Case Study on the TSP with Time Windows. Lecture Notes in Computer Science, 2009, , 59-73.	1.0	1
129	Tabu Search for the Founder Sequence Reconstruction Problem: A Preliminary Study. Lecture Notes in Computer Science, 2009, , 1035-1042.	1.0	7
130	An ant colony optimization algorithm for DNA sequencing by hybridization. Computers and Operations Research, 2008, 35, 3620-3635.	2.4	50
131	Swarm Intelligence in Optimization. Natural Computing Series, 2008, , 43-85.	2.2	238
132	Energy-efficient multicasting in wireless ad-hoc networks: An ant colony optimization approach. , 2008, , .		3
133	Beam-ACO for Simple Assembly Line Balancing. INFORMS Journal on Computing, 2008, 20, 618-627.	1.0	68
134	Hybrid Metaheuristics: An Introduction. Studies in Computational Intelligence, 2008, , 1-30.	0.7	65
135	Hybridizations of Metaheuristics With Branch & Bound Derivates. Studies in Computational Intelligence, 2008, , 85-116.	0.7	16
136	An Extended Beam-ACO Approach to the Time and Space Constrained Simple Assembly Line Balancing Problem. Lecture Notes in Computer Science, 2008, , 85-96.	1.0	6
137	Ant Colony Optimization for Energy-Efficient Broadcasting in Ad-Hoc Networks. Lecture Notes in Computer Science, 2008, , 25-36.	1.0	13
138	ACO vs EAs for solving a real-world frequency assignment problem in GSM networks. , 2007, , .		43
139	Iterated local search and constructive heuristics for error correcting code design. International Journal of Innovative Computing and Applications, 2007, 1, 14.	0.2	1
140	Ant Colony Optimization: Introduction and Hybridizations. , 2007, , .		1
141	Ant Colony Optimization: Introduction and Hybridizations. , 2007, , .		7
142	Revisiting dynamic programming for finding optimal subtrees in trees. European Journal of Operational Research, 2007, 177, 102-115.	3.5	24
143	Finding Edge-disjoint Paths in Networks: An Ant Colony Optimization Algorithm. Mathematical Modelling and Algorithms, 2007, 6, 361-391.	0.5	18
144	An ant colony optimization algorithm for continuous optimization: application to feed-forward neural network training. Neural Computing and Applications, 2007, 16, 235-247.	3.2	229

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145	A Probabilistic Beam Search Approach to the Shortest Common Supersequence Problem. Lecture Notes in Computer Science, 2007, , 36-47.	1.0	8
146	Probabilistic Beam Search for the Longest Common Subsequence Problem. , 2007, , 150-161.		12
147	Using Branch & Bound Concepts in Construction-Based Metaheuristics: Exploiting the Dual Problem Knowledge. Lecture Notes in Computer Science, 2007, , 123-139.	1.0	4
148	Ant Colony Optimization. , 2006, , 153-180.		3
149	A nature-inspired algorithm for the disjoint paths problem. , 2006, , .		0
150	A new hybrid evolutionary algorithm for the huge k-cardinality tree problem. , 2006, , .		4
151	Beam-ACO Applied to Assembly Line Balancing. Lecture Notes in Computer Science, 2006, , 96-107.	1.0	18
152	Multi-level Ant Colony Optimization for DNA Sequencing by Hybridization. Lecture Notes in Computer Science, 2006, , 94-109.	1.0	4
153	New Constructive Heuristics for DNA Sequencing by Hybridization. Lecture Notes in Computer Science, 2006, , 355-365.	1.0	3
154	An Introduction to Metaheuristic Techniques. , 2005, , 1-42.		17
155	Ant colony optimization: Introduction and recent trends. Physics of Life Reviews, 2005, 2, 353-373.	1.5	866
156	New metaheuristic approaches for the edge-weighted k-cardinality tree problem. Computers and Operations Research, 2005, 32, 1355-1377.	2.4	62
157	Beam-ACOâ€"hybridizing ant colony optimization with beam search: an application to open shop scheduling. Computers and Operations Research, 2005, 32, 1565-1591.	2.4	337
158	Ant colony optimization theory: A survey. Theoretical Computer Science, 2005, 344, 243-278.	0.5	1,830
159	Combining Ant Colony Optimization with Dynamic Programming for Solving the k-Cardinality Tree Problem. Lecture Notes in Computer Science, 2005, , 25-33.	1.0	10
160	Search Bias in Ant Colony Optimization: On the Role of Competition-Balanced Systems. IEEE Transactions on Evolutionary Computation, 2005, 9, 159-174.	7.5	87
161	Training feed-forward neural networks with ant colony optimization: an application to pattern classification. , 2005, , .		100
162	An Ant Colony Optimization Algorithm for Shop Scheduling Problems. Mathematical Modelling and Algorithms, 2004, 3, 285-308.	0.5	213

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163	Ant Colony Optimization for the Maximum Edge-Disjoint Paths Problem. Lecture Notes in Computer Science, 2004, , 160-169.	1.0	16
164	The Hyper-Cube Framework for Ant Colony Optimization. IEEE Transactions on Systems, Man, and Cybernetics, 2004, 34, 1161-1172.	5.5	329
165	Deception in Ant Colony Optimization. Lecture Notes in Computer Science, 2004, , 118-129.	1.0	24
166	Local search algorithms for the k-cardinality tree problem. Discrete Applied Mathematics, 2003, 128, 511-540.	0.5	18
167	Metaheuristics in combinatorial optimization. ACM Computing Surveys, 2003, 35, 268-308.	16.1	2,445
168	ACO Applied to Group Shop Scheduling: A Case Study on Intensification and Diversification. Lecture Notes in Computer Science, 2002, , 14-27.	1.0	27
169	Metaheuristics for Group Shop Scheduling. Lecture Notes in Computer Science, 2002, , 631-640.	1.0	11
170	When Model Bias Is Stronger than Selection Pressure. Lecture Notes in Computer Science, 2002, , 893-902.	1.0	19
171	Critical Parallelization of Local Search for MAX-SAT. Lecture Notes in Computer Science, 2001, , 147-158.	1.0	3
172	Diagnosis of Finger Dysfunction Caused by Ulnar Nerve Lesion. Journal of Intelligent Systems, 1998, 8, .	1.2	0
173	Interpretation of a hierarchical neural network. Lecture Notes in Computer Science, 1997, , 651-659.	1.0	0
174	Ant colony optimization for FOP shop scheduling: a case study on different pheromone representations. , 0, , .		45