Christian Blum

List of Publications by Year in Descending Order

169 papers	7,209 citations	26 h-index	84 g-index
197 ext. papers	8,505 ext. citations	3.9 avg, IF	6.55 L-index

#	Paper	IF	Citations
169	Variable Neighborhood Search for the Two-Echelon Electric Vehicle Routing Problem with Time Windows. *Applied Sciences (Switzerland)*, **2022**, 12, 1014	2.6	1
168	A Population-Based Iterated Greedy Algorithm for Maximizing Sensor Network Lifetime.. *Sensors*, **2022**, 22,	3.8	1
167	Graph search and variable neighborhood search for finding constrained longest common subsequences in artificial and real gene sequences. *Applied Soft Computing Journal*, **2022**, 108844	7.5	1
166	Application of A$*$ to the Generalized Constrained Longest Common Subsequence Problem with Many Pattern Strings. *Lecture Notes in Computer Science*, **2022**, 53-64	0.9	
165	ANTS 2020 Special Issue: Editorial. *Swarm Intelligence*, **2021**, 15, 311-313	3	
164	A Greedy Heuristic for Maximizing the Lifetime of Wireless Sensor Networks Based on Disjoint Weighted Dominating Sets. *Algorithms*, **2021**, 14, 170	1.8	2
163	Solving the Longest Common Subsequence Problem Concerning Non-Uniform Distributions of Letters in Input Strings. *Mathematics*, **2021**, 9, 1515	2.3	0
162	A comparative analysis of two matheuristics by means of merged local optima networks. *European Journal of Operational Research*, **2021**, 290, 36-56	5.6	2
161	Solving longest common subsequence problems via a transformation to the maximum clique problem. *Computers and Operations Research*, **2021**, 125, 105089	4.6	5
160	An A? search algorithm for the constrained longest common subsequence problem. *Information Processing Letters*, **2021**, 166, 106041	0.8	4
159	. *IEEE Transactions on Intelligent Transportation Systems*, **2021**, 22, 119-130	6.1	5
158	Optimization Techniques and Formal Verification for the Software Design of Boolean Algebra Based Safety-Critical Systems. *IEEE Transactions on Industrial Informatics*, **2021**, 1-1	11.9	
157	Adding Negative Learning to Ant Colony Optimization: A Comprehensive Study. *Mathematics*, **2021**, 9, 361	2.3	7
156	An Improved Greedy Heuristic for the Minimum Positive Influence Dominating Set Problem in Social Networks. *Algorithms*, **2021**, 14, 79	1.8	3
155	Search trajectory networks: A tool for analysing and visualising the behaviour of metaheuristics. *Applied Soft Computing Journal*, **2021**, 109, 107492	7.5	13
154	Barrakuda: A Hybrid Evolutionary Algorithm for Minimum Capacitated Dominating Set Problem. *Mathematics*, **2020**, 8, 1858	2.3	1
153	Solution Merging in Matheuristics for Resource Constrained Job Scheduling. *Algorithms*, **2020**, 13, 256	1.8	7

152	A new optimization model for wastewater treatment planning with a temporal component. *Chemical Engineering Research and Design*, **2020**, 136, 157-168	5.5	0
151	On Solving a Generalized Constrained Longest Common Subsequence Problem. *Lecture Notes in Computer Science*, **2020**, 55-70	0.9	2
150	A New Approach for Making Use of Negative Learning in Ant Colony Optimization. *Lecture Notes in Computer Science*, **2020**, 16-28	0.9	0
149	On the Use of Decision Diagrams for Finding Repetition-Free Longest Common Subsequences. *Lecture Notes in Computer Science*, **2020**, 134-149	0.9	
148	A Heuristic Approach for Solving the Longest Common Square Subsequence Problem. *Lecture Notes in Computer Science*, **2020**, 429-437	0.9	1
147	Search Trajectory Networks of Population-Based Algorithms in Continuous Spaces. *Lecture Notes in Computer Science*, **2020**, 70-85	0.9	12
146	Finding Longest Common Subsequences: New anytime A* search results. *Applied Soft Computing Journal*, **2020**, 95, 106499	7.5	4
145	Minimum common string partition: on solving large-scale problem instances. *International Transactions in Operational Research*, **2020**, 27, 91-111	2.9	1
144	Anytime algorithms for the longest common palindromic subsequence problem. *Computers and Operations Research*, **2020**, 114, 104827	4.6	5
143	An algorithm based on ant colony optimization for the minimum connected dominating set problem. *Applied Soft Computing Journal*, **2019**, 80, 672-686	7.5	18
142	Synergistic team composition: A computational approach to foster diversity in teams. *Knowledge-Based Systems*, **2019**, 182, 104799	7.3	10
141	Application of CMSA to the minimum capacitated dominating set problem **2019**,		5
140	Job sequencing with one common and multiple secondary resources: An A?/Beam Search based anytime algorithm. *Artificial Intelligence*, **2019**, 277, 103173	3.6	1
139	ANTS 2018 special issue: Editorial. *Swarm Intelligence*, **2019**, 13, 169-172	3	
138	Generic CP-Supported CMSA for Binary Integer Linear Programs. *Lecture Notes in Computer Science*, **2019**, 1-15	0.9	
137	A Biased Random Key Genetic Algorithm with Rollout Evaluations for the Resource Constraint Job Scheduling Problem. *Lecture Notes in Computer Science*, **2019**, 549-560	0.9	4
136	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	0.9	7
135	Exact and Heuristic Approaches for the Longest Common Palindromic Subsequence Problem. *Lecture Notes in Computer Science*, **2019**, 199-214	0.9	

134	Maximising the Net Present Value of Project Schedules Using CMSA and Parallel ACO. *Lecture Notes in Computer Science*, **2019**, 16-30	0.9	5
133	Metaheuristic Hybrids. *Profiles in Operations Research*, **2019**, 385-417	1	7
132	A comprehensive comparison of metaheuristics for the repetition-free longest common subsequence problem. *Journal of Heuristics*, **2018**, 24, 551-579	1.9	9
131	Hybrid techniques based on solving reduced problem instances for a longest common subsequence problem. *Applied Soft Computing Journal*, **2018**, 62, 15-28	7.5	6
130	The weighted independent domination problem: Integer linear programming models and metaheuristic approaches. *European Journal of Operational Research*, **2018**, 265, 860-871	5.6	6
129	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	0.9	3
128	ILP-Based Reduced Variable Neighborhood Search for Large-Scale Minimum Common String Partition. *Electronic Notes in Discrete Mathematics*, **2018**, 66, 15-22	0.3	1
127	Heterogeneous Teams for Homogeneous Performance. *Lecture Notes in Computer Science*, **2018**, 89-105	0.9	
126	Selected String Problems **2018**, 1221-1240		
125	The Weighted Independent Domination Problem: ILP Model and Algorithmic Approaches. *Lecture Notes in Computer Science*, **2017**, 201-214	0.9	1
124	Mining k-reachable sets in real-world networks using domination in shortcut graphs. *Journal of Computational Science*, **2017**, 22, 1-14	3.4	4
123	A hybrid evolutionary algorithm based on solution merging for the longest arc-preserving common subsequence problem **2017**,		3
122	Large neighborhood search for the most strings with few bad columns problem. *Soft Computing*, **2017**, 21, 4901-4915	3.5	1
121	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	0.9	2
120	Extension of the CMSA Algorithm **2016**,		2
119	Computational performance evaluation of two integer linear programming models for the minimum common string partition problem. *Optimization Letters*, **2016**, 10, 189-205	1.1	2
118	Construct, Merge, Solve & Adapt A new general algorithm for combinatorial optimization. *Computers and Operations Research*, **2016**, 68, 75-88	4.6	46
117	A hybrid algorithmic model for the minimum weight dominating set problem. *Simulation Modelling Practice and Theory*, **2016**, 64, 57-68	3.9	15

116	Construct, Merge, Solve and Adapt: Application to Unbalanced Minimum Common String Partition. *Lecture Notes in Computer Science*, **2016**, 17-31	0.9	3
115	Hybrid Metaheuristics. *The Artificial Intelligence: Foundationsory, and Algorithms*, **2016**,	43	12
114	Construct, Merge, Solve and Adapt: Application to the Repetition-Free Longest Common Subsequence Problem. *Lecture Notes in Computer Science*, **2016**, 46-57	0.9	7
113	**2016**,		30
112	FrogCOL and FrogMIS: new decentralized algorithms for finding large independent sets in graphs. *Swarm Intelligence*, **2015**, 9, 205-227	3	6
111	An artificial bioindicator system for network intrusion detection. *Artificial Life*, **2015**, 21, 93-118	1.4	4
110	The firefighter problem: Empirical results on random graphs. *Computers and Operations Research*, **2015**, 60, 55-66	4.6	9
109	A randomized population-based iterated greedy algorithm for the minimum weight dominating set problem **2015**,		1
108	A matheuristic for the minimum weight rooted arborescence problem. *Journal of Heuristics*, **2015**, 21, 479-499	1.9	6
107	Ant Colony Optimization for the Minimum-Weight Rooted Arborescence Problem **2015**, 1333-1343		
106	Swarm Intelligence in Optimization and Robotics **2015**, 1291-1309		14
105	On solving the most strings with few bad columns problem: An ILP model and heuristics **2015**,		1
104	Mathematical programming strategies for solving the minimum common string partition problem. *European Journal of Operational Research*, **2015**, 242, 769-777	5.6	11
103	The Firefighter Problem: Application of Hybrid Ant Colony Optimization Algorithms. *Lecture Notes in Computer Science*, **2014**, 218-229	0.9	7
102	A Hybrid Ant Colony Optimization Algorithm for the Far From Most String Problem. *Lecture Notes in Computer Science*, **2014**, 1-12	0.9	3
101	FrogSim: distributed graph coloring in wireless ad hoc networks. *Telecommunication Systems*, **2014**, 55, 211-223	2.3	10
100	Iterative Probabilistic Tree Search for the Minimum Common String Partition Problem. *Lecture Notes in Computer Science*, **2014**, 145-154	0.9	5
99	Can Frogs Find Large Independent Sets in a Decentralized Way? Yes They Can!. *Lecture Notes in Computer Science*, **2014**, 74-85	0.9	1

98	Beam-ACO for the Repetition-Free Longest Common Subsequence Problem. *Lecture Notes in Computer Science*, **2014**, 79-90	0.9	3
97	Learning Maximum Weighted (k+1)-Order Decomposable Graphs by Integer Linear Programming. *Lecture Notes in Computer Science*, **2014**, 396-408	0.9	
96	ANTS 2012 special issue. *Swarm Intelligence*, **2013**, 7, 79-81	3	
95	Solving the 2D Bin Packing Problem by Means of a Hybrid Evolutionary Algorithm. *Procedia Computer Science*, **2013**, 18, 899-908	1.6	13
94	The travelling salesman problem with time windows: Adapting algorithms from travel-time to makespan optimization. *Applied Soft Computing Journal*, **2013**, 13, 3806-3815	7.5	46
93	An iterated greedy algorithm for the large-scale unrelated parallel machines scheduling problem. *Computers and Operations Research*, **2013**, 40, 1829-1841	4.6	56
92	Large neighbourhood search applied to the efficient solution of spatially explicit strategic supply chain management problems. *Computers and Chemical Engineering*, **2013**, 49, 114-126	4	16
91	Application of Large Neighborhood Search to Strategic Supply Chain Management in the Chemical Industry. *Studies in Computational Intelligence*, **2013**, 335-352	0.8	1
90	Variable neighbourhood search for the variable sized bin packing problem. *Computers and Operations Research*, **2012**, 39, 1097-1108	4.6	26
89	Large neighbourhood search algorithms for the founder sequence reconstruction problem. *Computers and Operations Research*, **2012**, 39, 213-224	4.6	4
88	Hybrid Algorithms for the Minimum-Weight Rooted Arborescence Problem. *Lecture Notes in Computer Science*, **2012**, 61-72	0.9	1
87	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	3.2	15
86	Distributed ant colony optimization for minimum energy broadcasting in sensor networks with realistic antennas. *Computers and Mathematics With Applications*, **2012**, 64, 3683-3700	2.7	5
85	Iterated Greedy Algorithms for the Maximal Covering Location Problem. *Lecture Notes in Computer Science*, **2012**, 172-181	0.9	3
84	Distributed graph coloring: an approach based on the calling behavior of Japanese tree frogs. *Swarm Intelligence*, **2012**, 6, 117-150	3	38
83	A population-based iterated greedy algorithm for the minimum weight vertex cover problem. *Applied Soft Computing Journal*, **2012**, 12, 1632-1639	7.5	51
82	Hybrid Metaheuristics in Combinatorial Optimization: A Tutorial. *Lecture Notes in Computer Science*, **2012**, 1-10	0.9	6
81	An Artificial Bee Colony Algorithm for the Unrelated Parallel Machines Scheduling Problem. *Lecture Notes in Computer Science*, **2012**, 143-152	0.9	18

80	Evolutionary Optimization **2012**, 1-29		11
79	FlockOpt: A new swarm optimization algorithm based on collective behavior of starling birds **2011**,		4
78	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	7.5	16
77	Distributed graph coloring in wireless ad hoc networks: A light-weight algorithm based on Japanese tree frogsNcalling behaviour **2011**,		3
76	Hybrid metaheuristics in combinatorial optimization: A survey. *Applied Soft Computing Journal*, **2011**, 11, 4135-4151	7.5	479
75	Automated reconstruction of dendritic and axonal trees by global optimization with geometric priors. *Neuroinformatics*, **2011**, 9, 279-302	3.2	95
74	On solving the assembly line worker assignment and balancing problem via beam search. *Computers and Operations Research*, **2011**, 38, 328-339	4.6	72
73	Implementing a model of Japanese tree frogsNcalling behavior in sensor networks **2011**,		3
72	Foundations of Antcycle: Self-synchronized Duty-cycling in Mobile Sensor Networks. *Computer Journal*, **2011**, 54, 1427-1448	1.3	
71	Solving the Two-Dimensional Bin Packing Problem with a Probabilistic Multi-start Heuristic. *Lecture Notes in Computer Science*, **2011**, 76-90	0.9	1
70	Hybrid Metaheuristics. *Springer Optimization and Its Applications*, **2011**, 305-335	0.4	5
69	Hybrid Algorithms for the Variable Sized Bin Packing Problem. *Lecture Notes in Computer Science*, **2010**, 16-30	0.9	1
68	Metaheuristic Hybrids. *Profiles in Operations Research*, **2010**, 469-496	1	15
67	A Protocol for Self-Synchronized Duty-Cycling in Sensor Networks: Generic Implementation in Wiselib **2010**,		2
66	Beam-ACO for the longest common subsequence problem **2010**,		3
65	Hybrid Metaheuristics. *Computers and Operations Research*, **2010**, 37, 430-431	4.6	12
64	Beam-ACO for the travelling salesman problem with time windows. *Computers and Operations Research*, **2010**, 37, 1570-1583	4.6	84
63	On the use of different types of knowledge in metaheuristics based on constructing solutions. *Engineering Applications of Artificial Intelligence*, **2010**, 23, 650-659	7.2	7

62	Reconstructing geometrically consistent tree structures from noisy images. *Lecture Notes in Computer Science*, **2010**, 13, 291-9	0.9	4
61	A Hybrid Metaheuristic for the Longest Common Subsequence Problem. *Lecture Notes in Computer Science*, **2010**, 1-15	0.9	1
60	A Randomized Iterated Greedy Algorithm for the Founder Sequence Reconstruction Problem. *Lecture Notes in Computer Science*, **2010**, 37-51	0.9	1
59	Self-synchronized duty-cycling in sensor networks with energy harvesting capabilities **2009**,		1
58	Ant colony optimization for multicasting in static wireless ad-hoc networks. *Swarm Intelligence*, **2009**, 3, 125-148	3	18
57	Beam search for the longest common subsequence problem. *Computers and Operations Research*, **2009**, 36, 3178-3186	4.6	41
56	Self-synchronized duty-cycling for mobile sensor networks with energy harvesting capabilities: A swarm intelligence study **2009**,		6
55	Evaluating New Advanced Multiobjective Metaheuristics **2009**, 63-82		
54	Metaheuristics in Bioinformatics: DNA Sequencing and Reconstruction **2009**, 265-286		2
53	Optimal Location of Antennas in Telecommunication Networks **2009**, 287-307		
52	Solving the KCT Problem: Large-Scale Neighborhood Search and Solution Merging **2009**, 407-421		2
51	**2009**,		17
50	Generating Automatic Projections by Means of Genetic Programming **2009**, 1-14		
49	Beam-ACO Based on Stochastic Sampling for Makespan Optimization Concerning the TSP with Time Windows. *Lecture Notes in Computer Science*, **2009**, 97-108	0.9	10
48	Hybridizing Beam-ACO with Constraint Programming for Single Machine Job Scheduling. *Lecture Notes in Computer Science*, **2009**, 30-44	0.9	11
47	Beam-ACO Based on Stochastic Sampling: A Case Study on the TSP with Time Windows. *Lecture Notes in Computer Science*, **2009**, 59-73	0.9	
46	Tabu Search for the Founder Sequence Reconstruction Problem: A Preliminary Study. *Lecture Notes in Computer Science*, **2009**, 1035-1042	0.9	2
45	Swarm Intelligence in Optimization. *Natural Computing Series*, **2008**, 43-85	2.5	171

44	Energy-efficient multicasting in wireless ad-hoc networks: An ant colony optimization approach **2008**,		1
43	Beam-ACO for Simple Assembly Line Balancing. *INFORMS Journal on Computing*, **2008**, 20, 618-627	2.4	59
42	Hybrid Metaheuristics: An Introduction. *Studies in Computational Intelligence*, **2008**, 1-30	0.8	53
41	An ant colony optimization algorithm for DNA sequencing by hybridization. *Computers and Operations Research*, **2008**, 35, 3620-3635	4.6	33
40	Emergent Sorting in Networks of Router Agents. *Lecture Notes in Computer Science*, **2008**, 299-306	0.9	
39	Hybridizations of Metaheuristics With Branch & Bound Derivates. *Studies in Computational Intelligence*, **2008**, 85-116	0.8	15
38	An Extended Beam-ACO Approach to the Time and Space Constrained Simple Assembly Line Balancing Problem. *Lecture Notes in Computer Science*, **2008**, 85-96	0.9	5
37	Ant Colony Optimization for Energy-Efficient Broadcasting in Ad-Hoc Networks. *Lecture Notes in Computer Science*, **2008**, 25-36	0.9	7
36	Ant Colony Optimization: Introduction and Hybridizations **2007**,		2
35	Revisiting dynamic programming for finding optimal subtrees in trees. *European Journal of Operational Research*, **2007**, 177, 102-115	5.6	22
34	Finding Edge-disjoint Paths in Networks: An Ant Colony Optimization Algorithm. *Mathematical Modelling and Algorithms*, **2007**, 6, 361-391		14
33	An ant colony optimization algorithm for continuous optimization: application to feed-forward neural network training. *Neural Computing and Applications*, **2007**, 16, 235-247	4.8	186
32	ACO vs EAs for solving a real-world frequency assignment problem in GSM networks **2007**,		31
31	Iterated local search and constructive heuristics for error correcting code design. *International Journal of Innovative Computing and Applications*, **2007**, 1, 14	0.4	1
30	Ant Colony Optimization: Introduction and Hybridizations **2007**,		1
29	A Probabilistic Beam Search Approach to the Shortest Common Supersequence Problem. *Lecture Notes in Computer Science*, **2007**, 36-47	0.9	7
28	Probabilistic Beam Search for the Longest Common Subsequence Problem **2007**, 150-161		10
27	Using Branch & Bound Concepts in Construction-Based Metaheuristics: Exploiting the Dual Problem Knowledge. *Lecture Notes in Computer Science*, **2007**, 123-139	0.9	3

26	A new hybrid evolutionary algorithm for the huge k-cardinality tree problem **2006**,		4
25	Beam-ACO Applied to Assembly Line Balancing. *Lecture Notes in Computer Science*, **2006**, 96-107	0.9	15
24	Ant Colony Optimization **2006**, 153-180		3
23	New Constructive Heuristics for DNA Sequencing by Hybridization. *Lecture Notes in Computer Science*, **2006**, 355-365	0.9	0
22	Multi-level Ant Colony Optimization for DNA Sequencing by Hybridization. *Lecture Notes in Computer Science*, **2006**, 94-109	0.9	4
21	Search bias in ant colony optimization: on the role of competition-balanced systems. *IEEE Transactions on Evolutionary Computation*, **2005**, 9, 159-174	15.6	55
20	Training feed-forward neural networks with ant colony optimization: an application to pattern classification **2005**,		78
19	An Introduction to Metaheuristic Techniques **2005**, 1-42		10
18	Ant colony optimization: Introduction and recent trends. *Physics of Life Reviews*, **2005**, 2, 353-373	2.1	613
17	New metaheuristic approaches for the edge-weighted k-cardinality tree problem. *Computers and Operations Research*, **2005**, 32, 1355-1377	4.6	48
16	Beam-ACO—hybridizing ant colony optimization with beam search: an application to open shop scheduling. *Computers and Operations Research*, **2005**, 32, 1565-1591	4.6	266
15	Ant colony optimization theory: A survey. *Theoretical Computer Science*, **2005**, 344, 243-278	1.1	1400
14	Combining Ant Colony Optimization with Dynamic Programming for Solving the k-Cardinality Tree Problem. *Lecture Notes in Computer Science*, **2005**, 25-33	0.9	8
13	An Ant Colony Optimization Algorithm for Shop Scheduling Problems. *Mathematical Modelling and Algorithms*, **2004**, 3, 285-308		164
12	Ant Colony Optimization for the Maximum Edge-Disjoint Paths Problem. *Lecture Notes in Computer Science*, **2004**, 160-169	0.9	11
11	The hyper-cube framework for ant colony optimization. *IEEE Transactions on Systems, Man, and Cybernetics*, **2004**, 34, 1161-72		235
10	Deception in Ant Colony Optimization. *Lecture Notes in Computer Science*, **2004**, 118-129	0.9	16
9	Local search algorithms for the k-cardinality tree problem. *Discrete Applied Mathematics*, **2003**, 128, 511-540	1	17

8	Metaheuristics in combinatorial optimization. *ACM Computing Surveys*, **2003**, 35, 268-308	13.4	1969
7	ACO Applied to Group Shop Scheduling: A Case Study on Intensification and Diversification. *Lecture Notes in Computer Science*, **2002**, 14-27	0.9	16
6	Metaheuristics for Group Shop Scheduling. *Lecture Notes in Computer Science*, **2002**, 631-640	0.9	8
5	When Model Bias Is Stronger than Selection Pressure. *Lecture Notes in Computer Science*, **2002**, 893-902	0.9	16
4	Critical Parallelization of Local Search for MAX-SAT. *Lecture Notes in Computer Science*, **2001**, 147-158	0.9	3
3	Interpretation of a hierarchical neural network. *Lecture Notes in Computer Science*, **1997**, 651-659	0.9	
2	Diagnosis and monitoring of ulnar nerve lesions. *Lecture Notes in Computer Science*, **1997**, 211-222	0.9	
1	Ant colony optimization for FOP shop scheduling: a case study on different pheromone representations		26