List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Harris hawks optimization: Algorithm and applications. Future Generation Computer Systems, 2019, 97, 849-872.	7.5	3,345
2	Slime mould algorithm: A new method for stochastic optimization. Future Generation Computer Systems, 2020, 111, 300-323.	7.5	1,722
3	Hunger games search: Visions, conception, implementation, deep analysis, perspectives, and towards performance shifts. Expert Systems With Applications, 2021, 177, 114864.	7.6	642
4	RUN beyond the metaphor: An efficient optimization algorithm based on Runge Kutta method. Expert Systems With Applications, 2021, 181, 115079.	7.6	552
5	Evolving support vector machines using fruit fly optimization for medical data classification. Knowledge-Based Systems, 2016, 96, 61-75.	7.1	468
6	Toward an optimal kernel extreme learning machine using a chaotic moth-flame optimization strategy with applications in medical diagnoses. Neurocomputing, 2017, 267, 69-84.	5.9	401
7	The Colony Predation Algorithm. Journal of Bionic Engineering, 2021, 18, 674-710.	5.0	365
8	Chaotic multi-swarm whale optimizer boosted support vector machine for medical diagnosis. Applied Soft Computing Journal, 2020, 88, 105946.	7.2	364
9	A support vector machine classifier with rough set-based feature selection for breast cancer diagnosis. Expert Systems With Applications, 2011, 38, 9014-9022.	7.6	363
10	Enhanced Moth-flame optimizer with mutation strategy for global optimization. Information Sciences, 2019, 492, 181-203.	6.9	357
11	INFO: An efficient optimization algorithm based on weighted mean of vectors. Expert Systems With Applications, 2022, 195, 116516.	7.6	356
12	Chaos enhanced grey wolf optimization wrapped ELM for diagnosis of paraquat-poisoned patients. Computational Biology and Chemistry, 2019, 78, 481-490.	2.3	281
13	Feature selection based on improved ant colony optimization for online detection of foreign fiber in cotton. Applied Soft Computing Journal, 2014, 24, 585-596.	7.2	263
14	An enhanced fast non-dominated solution sorting genetic algorithm for multi-objective problems. Information Sciences, 2022, 585, 441-453.	6.9	261
15	Multi-population differential evolution-assisted Harris hawks optimization: Framework and case studies. Future Generation Computer Systems, 2020, 111, 175-198.	7.5	259
16	An improved particle swarm optimization for feature selection. Journal of Bionic Engineering, 2011, 8, 191-200.	5.0	244
17	An efficient diagnosis system for detection of Parkinson's disease using fuzzy k-nearest neighbor approach. Expert Systems With Applications, 2013, 40, 263-271.	7.6	235
18	A balanced whale optimization algorithm for constrained engineering design problems. Applied Mathematical Modelling, 2019, 71, 45-59.	4.2	234

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19	An opposition-based sine cosine approach with local search for parameter estimation of photovoltaic models. Energy Conversion and Management, 2019, 195, 927-942.	9.2	226
20	Parameters identification of photovoltaic cells and modules using diversification-enriched Harris hawks optimization with chaotic drifts. Journal of Cleaner Production, 2020, 244, 118778.	9.3	223
21	Orthogonal learning covariance matrix for defects of grey wolf optimizer: Insights, balance, diversity, and feature selection. Knowledge-Based Systems, 2021, 213, 106684.	7.1	223
22	An efficient hybrid kernel extreme learning machine approach for early diagnosis of Parkinson׳s disease. Neurocomputing, 2016, 184, 131-144.	5.9	222
23	An efficient chaotic mutative moth-flame-inspired optimizer for global optimization tasks. Expert Systems With Applications, 2019, 129, 135-155.	7.6	220
24	An improved grasshopper optimization algorithm with application to financial stress prediction. Applied Mathematical Modelling, 2018, 64, 654-668.	4.2	216
25	An enhanced Bacterial Foraging Optimization and its application for training kernel extreme learning machine. Applied Soft Computing Journal, 2020, 86, 105884.	7.2	211
26	Chaotic random spare ant colony optimization for multi-threshold image segmentation of 2D Kapur entropy. Knowledge-Based Systems, 2021, 216, 106510.	7.1	196
27	Towards augmented kernel extreme learning models for bankruptcy prediction: Algorithmic behavior and comprehensive analysis. Neurocomputing, 2021, 430, 185-212.	5.9	195
28	Adaptive computational chemotaxis based on field in bacterial foraging optimization. Soft Computing, 2014, 18, 797-807.	3.6	190
29	An Enhanced Grey Wolf Optimization Based Feature Selection Wrapped Kernel Extreme Learning Machine for Medical Diagnosis. Computational and Mathematical Methods in Medicine, 2017, 2017, 1-15.	1.3	190
30	Boosted binary Harris hawks optimizer and feature selection. Engineering With Computers, 2021, 37, 3741-3770.	6.1	184
31	Ultrasound-based differentiation of malignant and benign thyroid Nodules: An extreme learning machine approach. Computer Methods and Programs in Biomedicine, 2017, 147, 37-49.	4.7	179
32	Developing a new intelligent system for the diagnosis of tuberculous pleural effusion. Computer Methods and Programs in Biomedicine, 2018, 153, 211-225.	4.7	175
33	Evolving an optimal kernel extreme learning machine by using an enhanced grey wolf optimization strategy. Expert Systems With Applications, 2019, 138, 112814.	7.6	173
34	Orthogonally adapted Harris hawks optimization for parameter estimation of photovoltaic models. Energy, 2020, 203, 117804.	8.8	172
35	Gaussian mutational chaotic fruit fly-built optimization and feature selection. Expert Systems With Applications, 2020, 141, 112976.	7.6	171
36	Evolutionary biogeography-based whale optimization methods with communication structure: Towards measuring the balance. Knowledge-Based Systems, 2021, 212, 106642.	7.1	165

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37	A Novel Deep-Learning Model for Automatic Detection and Classification of Breast Cancer Using the Transfer-Learning Technique. IEEE Access, 2021, 9, 71194-71209.	4.2	162
38	A novel bankruptcy prediction model based on an adaptive fuzzy k-nearest neighbor method. Knowledge-Based Systems, 2011, 24, 1348-1359.	7.1	158
39	Face Recognition and Micro-expression Recognition Based on Discriminant Tensor Subspace Analysis Plus Extreme Learning Machine. Neural Processing Letters, 2014, 39, 25-43.	3.2	157
40	Grey wolf optimization evolving kernel extreme learning machine: Application to bankruptcy prediction. Engineering Applications of Artificial Intelligence, 2017, 63, 54-68.	8.1	154
41	Boosted mutation-based Harris hawks optimizer for parameters identification of single-diode solar cell models. Energy Conversion and Management, 2020, 209, 112660.	9.2	153
42	Multi-strategy boosted mutative whale-inspired optimization approaches. Applied Mathematical Modelling, 2019, 73, 109-123.	4.2	144
43	Double adaptive weights for stabilization of moth flame optimizer: Balance analysis, engineering cases, and medical diagnosis. Knowledge-Based Systems, 2021, 214, 106728.	7.1	144
44	Multi-objective optimization and multi-criteria decision-making methods for optimal design of standalone photovoltaic system: A comprehensive review. Renewable and Sustainable Energy Reviews, 2021, 135, 110202.	16.4	138
45	Orthogonal Nelder-Mead moth flame method for parameters identification of photovoltaic modules. Energy Conversion and Management, 2020, 211, 112764.	9.2	135
46	MOSMA: Multi-Objective Slime Mould Algorithm Based on Elitist Non-Dominated Sorting. IEEE Access, 2021, 9, 3229-3248.	4.2	134
47	An efficient double adaptive random spare reinforced whale optimization algorithm. Expert Systems With Applications, 2020, 154, 113018.	7.6	130
48	Directional mutation and crossover boosted ant colony optimization with application to COVID-19 X-ray image segmentation. Computers in Biology and Medicine, 2022, 148, 105810.	7.0	130
49	A multi-strategy enhanced sine cosine algorithm for global optimization and constrained practical engineering problems. Applied Mathematics and Computation, 2020, 369, 124872.	2.2	126
50	An efficient machine learning approach for diagnosis of paraquat-poisoned patients. Computers in Biology and Medicine, 2015, 59, 116-124.	7.0	125
51	Parameter adaptation-based ant colony optimization with dynamic hybrid mechanism. Engineering Applications of Artificial Intelligence, 2022, 114, 105139.	8.1	121
52	Crow Search Algorithm: Theory, Recent Advances, and Applications. IEEE Access, 2020, 8, 173548-173565.	4.2	118
53	Generative Adversarial Networks in Medical Image augmentation: A review. Computers in Biology and Medicine, 2022, 144, 105382.	7.0	118
54	Ant colony optimization with horizontal and vertical crossover search: Fundamental visions for multi-threshold image segmentation. Expert Systems With Applications, 2021, 167, 114122.	7.6	116

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55	Dispersed foraging slime mould algorithm: Continuous and binary variants for global optimization and wrapper-based feature selection. Knowledge-Based Systems, 2022, 237, 107761.	7.1	115
56	Efficient boosted grey wolf optimizers for global search and kernel extreme learning machine training. Applied Soft Computing Journal, 2019, 81, 105521.	7.2	113
57	Parameters identification of photovoltaic cell models using enhanced exploratory salp chains-based approach. Energy, 2020, 198, 117333.	8.8	106
58	Daily global solar radiation prediction from air temperatures using kernel extreme learning machine: A case study for Iran. Journal of Atmospheric and Solar-Terrestrial Physics, 2015, 134, 109-117.	1.6	104
59	Dimension decided Harris hawks optimization with Gaussian mutation: Balance analysis and diversity patterns. Knowledge-Based Systems, 2021, 215, 106425.	7.1	104
60	Horizontal and vertical crossover of Harris hawk optimizer with Nelder-Mead simplex for parameter estimation of photovoltaic models. Energy Conversion and Management, 2020, 223, 113211.	9.2	100
61	Predicting Entrepreneurial Intention of Students: An Extreme Learning Machine With Gaussian Barebone Harris Hawks Optimizer. IEEE Access, 2020, 8, 76841-76855.	4.2	98
62	Towards an optimal support vector machine classifier using a parallel particle swarm optimization strategy. Applied Mathematics and Computation, 2014, 239, 180-197.	2.2	97
63	Effective detection of Parkinson's disease using an adaptive fuzzy k-nearest neighbor approach. Biomedical Signal Processing and Control, 2013, 8, 364-373.	5.7	96
64	An enhanced associative learning-based exploratory whale optimizer for global optimization. Neural Computing and Applications, 2020, 32, 5185-5211.	5.6	96
65	Resource allocation and trust computing for blockchain-enabled edge computing system. Computers and Security, 2021, 105, 102249.	6.0	96
66	Towards Context-aware Social Recommendation via Individual Trust. Knowledge-Based Systems, 2017, 127, 58-66.	7.1	93
67	An Intelligent Parkinson's Disease Diagnostic System Based on a Chaotic Bacterial Foraging Optimization Enhanced Fuzzy KNN Approach. Computational and Mathematical Methods in Medicine, 2018, 2018, 1-24.	1.3	92
68	Chaos-Induced and Mutation-Driven Schemes Boosting Salp Chains-Inspired Optimizers. IEEE Access, 2019, 7, 31243-31261.	4.2	92
69	A new hybrid method based on local fisher discriminant analysis and support vector machines for hepatitis disease diagnosis. Expert Systems With Applications, 2011, 38, 11796-11803.	7.6	91
70	Predicting Intentions of Students for Master Programs Using a Chaos-Induced Sine Cosine-Based Fuzzy K-Nearest Neighbor Classifier. IEEE Access, 2019, 7, 67235-67248.	4.2	91
71	Boosted kernel search: Framework, analysis and case studies on the economic emission dispatch problem. Knowledge-Based Systems, 2021, 233, 107529.	7.1	91
72	Support Vector Machine Based Diagnostic System for Breast Cancer Using Swarm Intelligence. Journal of Medical Systems, 2012, 36, 2505-2519.	3.6	88

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73	Advanced orthogonal learning-driven multi-swarm sine cosine optimization: Framework and case studies. Expert Systems With Applications, 2020, 144, 113113.	7.6	88
74	SGOA: annealing-behaved grasshopper optimizer for global tasks. Engineering With Computers, 2022, 38, 3761-3788.	6.1	88
75	Efficient multi-population outpost fruit fly-driven optimizers: Framework and advances in support vector machines. Expert Systems With Applications, 2020, 142, 112999.	7.6	84
76	A Three-Stage Expert System Based on Support Vector Machines for Thyroid Disease Diagnosis. Journal of Medical Systems, 2012, 36, 1953-1963.	3.6	83
77	Chaos-enhanced synchronized bat optimizer. Applied Mathematical Modelling, 2020, 77, 1201-1215.	4.2	83
78	Medical image augmentation for lesion detection using a texture-constrained multichannel progressive GAN. Computers in Biology and Medicine, 2022, 145, 105444.	7.0	82
79	Design of an Enhanced Fuzzy k-nearest Neighbor Classifier Based Computer Aided Diagnostic System for Thyroid Disease. Journal of Medical Systems, 2012, 36, 3243-3254.	3.6	79
80	Feature evaluation and selection with cooperative game theory. Pattern Recognition, 2012, 45, 2992-3002.	8.1	79
81	Feature selection using dynamic weights for classification. Knowledge-Based Systems, 2013, 37, 541-549.	7.1	79
82	Multilevel threshold image segmentation with diffusion association slime mould algorithm and Renyi's entropy for chronic obstructive pulmonary disease. Computers in Biology and Medicine, 2021, 134, 104427.	7.0	79
83	A Computer Aided Diagnosis System for Thyroid Disease Using Extreme Learning Machine. Journal of Medical Systems, 2012, 36, 3327-3337.	3.6	78
84	A two-stage feature selection method with its application. Computers and Electrical Engineering, 2015, 47, 114-125.	4.8	77
85	Image segmentation of Leaf Spot Diseases on Maize using multi-stage Cauchy-enabled grey wolf algorithm. Engineering Applications of Artificial Intelligence, 2022, 109, 104653.	8.1	76
86	Apple leaf disease recognition method with improved residual network. Multimedia Tools and Applications, 2022, 81, 7759-7782.	3.9	75
87	Medical image classification using spatial adjacent histogram based on adaptive local binary patterns. Computers in Biology and Medicine, 2016, 72, 185-200.	7.0	74
88	An Effective Computational Model for Bankruptcy Prediction Using Kernel Extreme Learning Machine Approach. Computational Economics, 2017, 49, 325-341.	2.6	74
89	A new fruit fly optimization algorithm enhanced support vector machine for diagnosis of breast cancer based on high-level features. BMC Bioinformatics, 2019, 20, 290.	2.6	74
90	A fast approach for detection of erythemato-squamous diseases based on extreme learning machine with maximum relevance minimum redundancy feature selection. International Journal of Systems Science, 2015, 46, 919-931.	5.5	73

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91	Boosting slime mould algorithm for parameter identification of photovoltaic models. Energy, 2021, 234, 121164.	8.8	73
92	Evaluation of Sino Foreign Cooperative Education Project Using Orthogonal Sine Cosine Optimized Kernel Extreme Learning Machine. IEEE Access, 2020, 8, 61107-61123.	4.2	72
93	A consensus successive projections algorithm – multiple linear regression method for analyzing near infrared spectra. Analytica Chimica Acta, 2015, 858, 16-23.	5.4	70
94	Ant colony optimization with Cauchy and greedy Levy mutations for multilevel COVID 19 X-ray image segmentation. Computers in Biology and Medicine, 2021, 136, 104609.	7.0	69
95	Simulated annealing-based dynamic step shuffled frog leaping algorithm: Optimal performance design and feature selection. Neurocomputing, 2022, 503, 325-362.	5.9	68
96	Adaptive soft erasure with edge self-attention for weakly supervised semantic segmentation: Thyroid ultrasound image case study. Computers in Biology and Medicine, 2022, 144, 105347.	7.0	66
97	Boosting whale optimization with evolution strategy and Gaussian random walks: an image segmentation method. Engineering With Computers, 2023, 39, 1935-1979.	6.1	65
98	Performance optimization of differential evolution with slime mould algorithm for multilevel breast cancer image segmentation. Computers in Biology and Medicine, 2021, 138, 104910.	7.0	64
99	Evolving kernel extreme learning machine for medical diagnosis via a disperse foraging sine cosine algorithm. Computers in Biology and Medicine, 2022, 141, 105137.	7.0	63
100	A New Hybrid Intelligent Framework for Predicting Parkinson's Disease. IEEE Access, 2017, 5, 17188-17200.	4.2	62
101	Detection of COVID-19 severity using blood gas analysis parameters and Harris hawks optimized extreme learning machine. Computers in Biology and Medicine, 2022, 142, 105166.	7.0	60
102	Chaos Enhanced Bacterial Foraging Optimization for Global Optimization. IEEE Access, 2018, 6, 64905-64919.	4.2	59
103	A New Effective Machine Learning Framework for Sepsis Diagnosis. IEEE Access, 2018, 6, 48300-48310.	4.2	59
104	Dynamic Gaussian bare-bones fruit fly optimizers with abandonment mechanism: method and analysis. Engineering With Computers, 2022, 38, 743-771.	6.1	59
105	Rationalized fruit fly optimization with sine cosine algorithm: A comprehensive analysis. Expert Systems With Applications, 2020, 157, 113486.	7.6	59
106	Ensemble mutation-driven salp swarm algorithm with restart mechanism: Framework and fundamental analysis. Expert Systems With Applications, 2021, 165, 113897.	7.6	59
107	Parameters extraction of three diode photovoltaic models using boosted LSHADE algorithm and Newton Raphson method. Energy, 2021, 224, 120136.	8.8	59
108	Using cooperative game theory to optimize the feature selection problem. Neurocomputing, 2012, 97, 86-93.	5.9	57

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109	Predicting Green Consumption Behaviors of Students Using Efficient Firefly Grey Wolf-Assisted K-Nearest Neighbor Classifiers. IEEE Access, 2020, 8, 35546-35562.	4.2	57
110	Performance optimization of support vector machine with oppositional grasshopper optimization for acute appendicitis diagnosis. Computers in Biology and Medicine, 2022, 143, 105206.	7.0	57
111	Orthogonally-designed adapted grasshopper optimization: A comprehensive analysis. Expert Systems With Applications, 2020, 150, 113282.	7.6	56
112	Horizontal and vertical search artificial bee colony for image segmentation of COVID-19 X-ray images. Computers in Biology and Medicine, 2022, 142, 105181.	7.0	55
113	Random reselection particle swarm optimization for optimal design of solar photovoltaic modules. Energy, 2022, 239, 121865.	8.8	54
114	A quantum-behaved simulated annealing algorithm-based moth-flame optimization method. Applied Mathematical Modelling, 2020, 87, 1-19.	4.2	54
115	An Ant Colony Optimization Based Dimension Reduction Method for High-Dimensional Datasets. Journal of Bionic Engineering, 2013, 10, 231-241.	5.0	53
116	Chaotic oppositional sine–cosine method for solving global optimization problems. Engineering With Computers, 2022, 38, 1223-1239.	6.1	53
117	Harmonized salp chain-built optimization. Engineering With Computers, 2021, 37, 1049-1079.	6.1	53
118	Random learning gradient based optimization for efficient design of photovoltaic models. Energy Conversion and Management, 2021, 230, 113751.	9.2	53
119	Memetic Harris Hawks Optimization: Developments and perspectives on project scheduling and QoS-aware web service composition. Expert Systems With Applications, 2021, 171, 114529.	7.6	53
120	Corn Leaf Diseases Diagnosis Based on K-Means Clustering and Deep Learning. IEEE Access, 2021, 9, 143824-143835.	4.2	53
121	Evolutionary warning system for COVID-19 severity: Colony predation algorithm enhanced extreme learning machine. Computers in Biology and Medicine, 2021, 136, 104698.	7.0	52
122	Advanced orthogonal moth flame optimization with Broyden–Fletcher–Goldfarb–Shanno algorithm: Framework and real-world problems. Expert Systems With Applications, 2020, 159, 113617.	7.6	51
123	Modified Whale Optimization Algorithm for Solar Cell and PV Module Parameter Identification. Complexity, 2021, 2021, 1-23.	1.6	51
124	An Efficient Diagnosis System for Parkinson's Disease Using Kernel-Based Extreme Learning Machine with Subtractive Clustering Features Weighting Approach. Computational and Mathematical Methods in Medicine, 2014, 2014, 1-14.	1.3	50
125	A multi-strategy enhanced salp swarm algorithm for global optimization. Engineering With Computers, 2022, 38, 1177-1203.	6.1	49
126	Research on a Covert Communication Model Realized by Using Smart Contracts in Blockchain Environment. IEEE Systems Journal, 2022, 16, 2822-2833.	4.6	49

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127	Multi-population following behavior-driven fruit fly optimization: A Markov chain convergence proof and comprehensive analysis. Knowledge-Based Systems, 2020, 210, 106437.	7.1	48
128	Boosting quantum rotation gate embedded slime mould algorithm. Expert Systems With Applications, 2021, 181, 115082.	7.6	48
129	Predicting Cervical Hyperextension Injury: A Covariance Guided Sine Cosine Support Vector Machine. IEEE Access, 2020, 8, 46895-46908.	4.2	47
130	Gradient-based optimization with ranking mechanisms for parameter identification of photovoltaic systems. Energy Reports, 2021, 7, 3979-3997.	5.1	47
131	Diagnosing Coronavirus Disease 2019 (COVID-19): Efficient Harris Hawks-Inspired Fuzzy K-Nearest Neighbor Prediction Methods. IEEE Access, 2021, 9, 17787-17802.	4.2	46
132	Multi-threshold image segmentation using a multi-strategy shuffled frog leaping algorithm. Expert Systems With Applications, 2022, 194, 116511.	7.6	46
133	Survival exploration strategies for Harris Hawks Optimizer. Expert Systems With Applications, 2021, 168, 114243.	7.6	45
134	Exponential locality preserving projections for small sample size problem. Neurocomputing, 2011, 74, 3654-3662.	5.9	44
135	A Covert Communication Method Using Special Bitcoin Addresses Generated by Vanitygen. Computers, Materials and Continua, 2020, 65, 597-616.	1.9	44
136	Evaluation of constraint in photovoltaic models by exploiting an enhanced ant lion optimizer. Solar Energy, 2020, 211, 503-521.	6.1	43
137	A new machine-learning method to prognosticate paraquat poisoned patients by combining coagulation, liver, and kidney indices. PLoS ONE, 2017, 12, e0186427.	2.5	43
138	Enhanced Harris hawks optimization with multi-strategy for global optimization tasks. Expert Systems With Applications, 2021, 185, 115499.	7.6	42
139	Pharmacokinetics and tissue distribution model of cabozantinib in rat determined by UPLC–MS/MS. Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences, 2015, 983-984, 125-131.	2.3	41
140	Performance optimization of salp swarm algorithm for multi-threshold image segmentation: Comprehensive study of breast cancer microscopy. Computers in Biology and Medicine, 2021, 139, 105015.	7.0	41
141	An Effective Machine Learning Approach for Prognosis of Paraquat Poisoning Patients Using Blood Routine Indexes. Basic and Clinical Pharmacology and Toxicology, 2017, 120, 86-96.	2.5	39
142	Adaptive Harris hawks optimization with persistent trigonometric differences for photovoltaic model parameter extraction. Engineering Applications of Artificial Intelligence, 2022, 109, 104608.	8.1	39
143	Levy-based antlion-inspired optimizers with orthogonal learning scheme. Engineering With Computers, 2022, 38, 397-418.	6.1	38
144	Differential evolution-assisted salp swarm algorithm with chaotic structure for real-world problems. Engineering With Computers, 2023, 39, 1735-1769.	6.1	38

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145	Laplacian Nelder-Mead spherical evolution for parameter estimation of photovoltaic models. Energy Conversion and Management, 2021, 243, 114223.	9.2	37
146	An efficient multilevel thresholding image segmentation method based on the slime mould algorithm with bee foraging mechanism: A real case with lupus nephritis images. Computers in Biology and Medicine, 2022, 142, 105179.	7.0	37
147	Secure and efficient data storage and sharing scheme for <scp>blockchainâ€based mobileâ€edge</scp> computing. Transactions on Emerging Telecommunications Technologies, 2021, 32, e4315.	3.9	36
148	Gaussian Barebone Salp Swarm Algorithm with Stochastic Fractal Search for medical image segmentation: A COVID-19 case study. Computers in Biology and Medicine, 2021, 139, 104941.	7.0	36
149	Dealing with multi-modality using synthesis of Moth-flame optimizer with sine cosine mechanisms. Mathematics and Computers in Simulation, 2021, 188, 291-318.	4.4	35
150	Evolving fuzzy k-nearest neighbors using an enhanced sine cosine algorithm: Case study of lupus nephritis. Computers in Biology and Medicine, 2021, 135, 104582.	7.0	34
151	Elitist non-dominated sorting Harris hawks optimization: Framework and developments for multi-objective problems. Expert Systems With Applications, 2021, 186, 115747.	7.6	33
152	An Improved Grey Wolf Optimization Strategy Enhanced SVM and Its Application in Predicting the Second Major. Mathematical Problems in Engineering, 2017, 2017, 1-12.	1.1	32
153	Automatic Analysis of Microaneurysms Turnover to Diagnose the Progression of Diabetic Retinopathy. IEEE Access, 2018, 6, 9632-9642.	4.2	32
154	Predict the Entrepreneurial Intention of Fresh Graduate Students Based on an Adaptive Support Vector Machine Framework. Mathematical Problems in Engineering, 2019, 2019, 1-16.	1.1	32
155	Adaptive levy-assisted salp swarm algorithm: Analysis and optimization case studies. Mathematics and Computers in Simulation, 2021, 181, 380-409.	4.4	32
156	Evolutionary shuffled frog leaping with memory pool for parameter optimization. Energy Reports, 2021, 7, 584-606.	5.1	32
157	Metaphor-free dynamic spherical evolution for parameter estimation of photovoltaic modules. Energy Reports, 2021, 7, 5175-5202.	5.1	32
158	CBGRU: A Detection Method of Smart Contract Vulnerability Based on a Hybrid Model. Sensors, 2022, 22, 3577.	3.8	32
159	Selection of interdependent genes via dynamic relevance analysis for cancer diagnosis. Journal of Biomedical Informatics, 2013, 46, 252-258.	4.3	31
160	An Adaptive Chaotic Sine Cosine Algorithm for Constrained and Unconstrained Optimization. Complexity, 2020, 2020, 1-36.	1.6	31
161	A New Kernel Extreme Learning Machine Framework for Somatization Disorder Diagnosis. IEEE Access, 2019, 7, 45512-45525.	4.2	30
162	Delayed dynamic step shuffling frog-leaping algorithm for optimal design of photovoltaic models. Energy Reports, 2021, 7, 228-246.	5.1	30

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163	A text GAN framework for creative essay recommendation. Knowledge-Based Systems, 2021, 232, 107501.	7.1	30
164	Gaussian kernel probability-driven slime mould algorithm with new movement mechanism for multi-level image segmentation. Measurement: Journal of the International Measurement Confederation, 2022, 192, 110884.	5.0	30
165	An optimized machine learning framework for predicting intradialytic hypotension using indexes of chronic kidney disease-mineral and bone disorders. Computers in Biology and Medicine, 2022, 145, 105510.	7.0	30
166	Identification of heavy metal-contaminated Tegillarca granosa using infrared spectroscopy. Analytical Methods, 2015, 7, 2172-2181.	2.7	29
167	Quantum-like mutation-induced dragonfly-inspired optimization approach. Mathematics and Computers in Simulation, 2020, 178, 259-289.	4.4	29
168	Rationalized Sine Cosine Optimization With Efficient Searching Patterns. IEEE Access, 2020, 8, 61471-61490.	4.2	29
169	Chaotic diffusionâ€limited aggregation enhanced grey wolf optimizer: Insights, analysis, binarization, and feature selection. International Journal of Intelligent Systems, 2022, 37, 4864-4927.	5.7	29
170	Using Blood Indexes to Predict Overweight Statuses: An Extreme Learning Machine-Based Approach. PLoS ONE, 2015, 10, e0143003.	2.5	28
171	Exploratory differential ant lion-based optimization. Expert Systems With Applications, 2020, 159, 113548.	7.6	28
172	Improved Salp Swarm Algorithm with mutation schemes for solving global optimization and engineering problems. Engineering With Computers, 2022, 38, 3927-3949.	6.1	27
173	Heterotopic Pregnancy After InÂVitro Fertilization and Embryo Transfer After Bilateral Total Salpingectomy/Tubal Ligation: Case Report and Literature Review. Journal of Minimally Invasive Gynecology, 2016, 23, 338-345.	0.6	26
174	Boosted hunting-based fruit fly optimization and advances in real-world problems. Expert Systems With Applications, 2020, 159, 113502.	7.6	26
175	A bioinformatic variant fruit fly optimizer for tackling optimization problems. Knowledge-Based Systems, 2021, 213, 106704.	7.1	26
176	Individual Disturbance and Attraction Repulsion Strategy Enhanced Seagull Optimization for Engineering Design. Mathematics, 2022, 10, 276.	2.2	26
177	A Meta-Heuristic-Based Approach for Qos-Aware Service Composition. IEEE Access, 2020, 8, 69579-69592.	4.2	25
178	Chaos-assisted multi-population salp swarm algorithms: Framework and case studies. Expert Systems With Applications, 2021, 168, 114369.	7.6	25
179	Video Deblurring via Spatiotemporal Pyramid Network and Adversarial Gradient Prior. Computer Vision and Image Understanding, 2021, 203, 103135.	4.7	25
180	Evaluation of constraint in photovoltaic cells using ensemble multi-strategy shuffled frog leading algorithms. Energy Conversion and Management, 2021, 244, 114484.	9.2	25

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181	Solar photovoltaic model parameter estimation based on orthogonally-adapted gradient-based optimization. Optik, 2022, 252, 168513.	2.9	25
182	An Effective Machine Learning Approach for Identifying Non-Severe and Severe Coronavirus Disease 2019 Patients in a Rural Chinese Population: The Wenzhou Retrospective Study. IEEE Access, 2021, 9, 45486-45503.	4.2	24
183	Memory-based Harris hawk optimization with learning agents: a feature selection approach. Engineering With Computers, 2022, 38, 4457-4478.	6.1	24
184	Feasibility of Infrared and Raman Spectroscopies for Identification of Juvenile Black Seabream (Sparus) Tj ETQqO 12429-12435.	0 0 rgBT / 5.2	Overlock 10 T 23
185	An intelligent prognostic system for analyzing patients with paraquat poisoning using arterial blood gas indexes. Journal of Pharmacological and Toxicological Methods, 2017, 84, 78-85.	0.7	23
186	Directional mutation and crossover for immature performance of whale algorithm with application to engineering optimization. Journal of Computational Design and Engineering, 2022, 9, 519-563.	3.1	23
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