

Essam H Houssein

List of Publications by Year in descending order

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Version: 2024-02-01

150
papers

7,840
citations

53794

45
h-index

60623

81
g-index

155
all docs

155
docs citations

155
times ranked

2781
citing authors

#	ARTICLE	IF	CITATIONS
1	Henry gas solubility optimization: A novel physics-based algorithm. Future Generation Computer Systems, 2019, 101, 646-667.	7.5	687
2	Archimedes optimization algorithm: a new metaheuristic algorithm for solving optimization problems. Applied Intelligence, 2021, 51, 1531-1551.	5.3	553
3	Honey Badger Algorithm: New metaheuristic algorithm for solving optimization problems. Mathematics and Computers in Simulation, 2022, 192, 84-110.	4.4	516
4	LÃ©vy flight distribution: A new metaheuristic algorithm for solving engineering optimization problems. Engineering Applications of Artificial Intelligence, 2020, 94, 103731.	8.1	296
5	Improved grasshopper optimization algorithm using opposition-based learning. Expert Systems With Applications, 2018, 112, 156-172.	7.6	272
6	Major Advances in Particle Swarm Optimization: Theory, Analysis, and Application. Swarm and Evolutionary Computation, 2021, 63, 100868.	8.1	214
7	Deep and machine learning techniques for medical imaging-based breast cancer: A comprehensive review. Expert Systems With Applications, 2021, 167, 114161.	7.6	195
8	Task Scheduling in Cloud Computing based on Meta-heuristics: Review, Taxonomy, Open Challenges, and Future Trends. Swarm and Evolutionary Computation, 2021, 62, 100841.	8.1	163
9	A novel hybrid Harris hawks optimization and support vector machines for drug design and discovery. Computers and Chemical Engineering, 2020, 133, 106656.	3.8	161
10	MOSOA: A new multi-objective seagull optimization algorithm. Expert Systems With Applications, 2021, 167, 114150.	7.6	153
11	An efficient henry gas solubility optimization for feature selection. Expert Systems With Applications, 2020, 152, 113364.	7.6	152
12	A novel Black Widow Optimization algorithm for multilevel thresholding image segmentation. Expert Systems With Applications, 2021, 167, 114159.	7.6	138
13	Challenges and recommended technologies for the industrial internet of things: A comprehensive review. Measurement: Journal of the International Measurement Confederation, 2020, 151, 107198.	5.0	118
14	An efficient hybrid sine-cosine Harris hawks optimization for low and high-dimensional feature selection. Expert Systems With Applications, 2021, 176, 114778.	7.6	116
15	S-shaped Binary Whale Optimization Algorithm for Feature Selection. Advances in Intelligent Systems and Computing, 2019, , 79-87.	0.6	110
16	Hybrid slime mould algorithm with adaptive guided differential evolution algorithm for combinatorial and global optimization problems. Expert Systems With Applications, 2021, 174, 114689.	7.6	107
17	New binary whale optimization algorithm for discrete optimization problems. Engineering Optimization, 2020, 52, 945-959.	2.6	106
18	An improved opposition-based marine predators algorithm for global optimization and multilevel thresholding image segmentation. Knowledge-Based Systems, 2021, 229, 107348.	7.1	92

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19	Optimal Sink Node Placement in Large Scale Wireless Sensor Networks Based on Harrisâ€™ Hawk Optimization Algorithm. IEEE Access, 2020, 8, 19381-19397.	4.2	91
20	An efficient ECG arrhythmia classification method based on Manta ray foraging optimization. Expert Systems With Applications, 2021, 181, 115131.	7.6	87
21	CoAID-DEEP: An Optimized Intelligent Framework for Automated Detecting COVID-19 Misleading Information on Twitter. IEEE Access, 2021, 9, 27840-27867.	4.2	85
22	An efficient multilevel thresholding segmentation method for thermography breast cancer imaging based on improved chimp optimization algorithm. Expert Systems With Applications, 2021, 185, 115651.	7.6	83
23	Human emotion recognition from EEG-based brainâ€™computer interface using machine learning: a comprehensive review. Neural Computing and Applications, 2022, 34, 12527-12557.	5.6	82
24	Gradient-Based Optimizer for Parameter Extraction in Photovoltaic Models. IEEE Access, 2021, 9, 13403-13416.	4.2	78
25	An Efficient Marine Predators Algorithm for Feature Selection. IEEE Access, 2021, 9, 60136-60153.	4.2	75
26	An improved Manta ray foraging optimizer for cost-effective emission dispatch problems. Engineering Applications of Artificial Intelligence, 2021, 100, 104155.	8.1	75
27	Improved manta ray foraging optimization for multi-level thresholding using COVID-19 CT images. Neural Computing and Applications, 2021, 33, 16899-16919.	5.6	75
28	Hybrid Harris hawks optimization with cuckoo search for drug design and discovery in chemoinformatics. Scientific Reports, 2020, 10, 14439.	3.3	73
29	An enhanced Archimedes optimization algorithm based on Local escaping operator and Orthogonal learning for PEM fuel cell parameter identification. Engineering Applications of Artificial Intelligence, 2021, 103, 104309.	8.1	72
30	MOGOA algorithm for constrained and unconstrained multi-objective optimization problems. Applied Intelligence, 2018, 48, 2268-2283.	5.3	70
31	An Improved Tunicate Swarm Algorithm for Global Optimization and Image Segmentation. IEEE Access, 2021, 9, 56066-56092.	4.2	70
32	An efficient slime mould algorithm for solving multi-objective optimization problems. Expert Systems With Applications, 2022, 187, 115870.	7.6	70
33	Salp Swarm Algorithm for Node Localization in Wireless Sensor Networks. Journal of Computer Networks and Communications, 2019, 2019, 1-12.	1.6	69
34	A modified Henry gas solubility optimization for solving motif discovery problem. Neural Computing and Applications, 2020, 32, 10759-10771.	5.6	69
35	Recent Methodology-Based Gradient-Based Optimizer for Economic Load Dispatch Problem. IEEE Access, 2021, 9, 44322-44338.	4.2	69
36	A binary whale optimization algorithm with hyperbolic tangent fitness function for feature selection. , 2017, , .		65

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37	Swarming behaviour of salps algorithm for predicting chemical compound activities. , 2017, , .		65
38	Binary Whale Optimization Algorithm for Dimensionality Reduction. Mathematics, 2020, 8, 1821.	2.2	65
39	An efficient Manta Ray Foraging Optimization algorithm for parameter extraction of three-diode photovoltaic model. Computers and Electrical Engineering, 2021, 94, 107304.	4.8	64
40	An automatic arrhythmia classification model based on improved Marine Predators Algorithm and Convolutions Neural Networks. Expert Systems With Applications, 2022, 187, 115936.	7.6	61
41	Enhanced Elephant Herding Optimization for Global Optimization. IEEE Access, 2019, 7, 34738-34752.	4.2	59
42	Nature-Inspired Optimization Algorithms for Text Document Clustering – A Comprehensive Analysis. Algorithms, 2020, 13, 345.	2.1	58
43	A modified Marine Predator Algorithm based on opposition based learning for tracking the global MPP of shaded PV system. Expert Systems With Applications, 2021, 183, 115253.	7.6	57
44	Turbulent Flow of Water-Based Optimization Using New Objective Function for Parameter Extraction of Six Photovoltaic Models. IEEE Access, 2021, 9, 35382-35398.	4.2	54
45	Intelligent human emotion recognition based on elephant herding optimization tuned support vector regression. Biomedical Signal Processing and Control, 2018, 45, 182-191.	5.7	52
46	Identification of Parameters in Photovoltaic Models through a Runge Kutta Optimizer. Mathematics, 2021, 9, 2313.	2.2	52
47	Maximizing lifetime of large-scale wireless sensor networks using multi-objective whale optimization algorithm. Telecommunication Systems, 2019, 72, 243-259.	2.5	51
48	A Hybrid Barnacles Mating Optimizer Algorithm With Support Vector Machines for Gene Selection of Microarray Cancer Classification. IEEE Access, 2021, 9, 64895-64905.	4.2	51
49	An efficient multi-thresholding based COVID-19 CT images segmentation approach using an improved equilibrium optimizer. Biomedical Signal Processing and Control, 2022, 73, 103401.	5.7	50
50	Hybrid quantum-classical convolutional neural network model for COVID-19 prediction using chest X-ray images. Journal of Computational Design and Engineering, 2022, 9, 343-363.	3.1	49
51	Machine learning in the quantum realm: The state-of-the-art, challenges, and future vision. Expert Systems With Applications, 2022, 194, 116512.	7.6	48
52	Enhanced Harris hawks optimization with genetic operators for selection chemical descriptors and compounds activities. Neural Computing and Applications, 2021, 33, 13601-13618.	5.6	45
53	Feature extraction of epilepsy EEG using discrete wavelet transform. , 2016, , .		43
54	An optimized deep learning architecture for breast cancer diagnosis based on improved marine predators algorithm. Neural Computing and Applications, 2022, 34, 18015-18033.	5.6	43

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55	Self-adaptive Equilibrium Optimizer for solving global, combinatorial, engineering, and Multi-Objective problems. <i>Expert Systems With Applications</i> , 2022, 195, 116552.	7.6	40
56	Modified honey badger algorithm based global MPPT for triple-junction solar photovoltaic system under partial shading condition and global optimization. <i>Energy</i> , 2022, 254, 124363.	8.8	40
57	Improving Twin Support Vector Machine Based on Hybrid Swarm Optimizer for Heartbeat Classification. <i>Pattern Recognition and Image Analysis</i> , 2018, 28, 243-253.	1.0	36
58	Hybridizing salp swarm algorithm with particle swarm optimization algorithm for recent optimization functions. <i>Evolutionary Intelligence</i> , 2022, 15, 23-56.	3.6	36
59	Machine Learning Techniques for Biomedical Natural Language Processing: A Comprehensive Review. <i>IEEE Access</i> , 2021, 9, 140628-140653.	4.2	36
60	An Efficient Slime Mould Algorithm Combined With K-Nearest Neighbor for Medical Classification Tasks. <i>IEEE Access</i> , 2021, 9, 113666-113682.	4.2	35
61	Hybrid Grasshopper Optimization Algorithm and Support Vector Machines for Automatic Seizure Detection in EEG Signals. <i>Advances in Intelligent Systems and Computing</i> , 2018, , 82-91.	0.6	35
62	Centroid mutation-based Search and Rescue optimization algorithm for feature selection and classification. <i>Expert Systems With Applications</i> , 2022, 191, 116235.	7.6	35
63	A Hybrid Heartbeats Classification Approach Based on Marine Predators Algorithm and Convolution Neural Networks. <i>IEEE Access</i> , 2021, 9, 86194-86206.	4.2	34
64	An Efficient Heap-Based Optimizer for Parameters Identification of Modified Photovoltaic Models. <i>Ain Shams Engineering Journal</i> , 2022, 13, 101728.	6.1	33
65	An efficient equilibrium optimizer with support vector regression for stock market prediction. <i>Neural Computing and Applications</i> , 2022, 34, 3165-3200.	5.6	32
66	Boolean Particle Swarm Optimization with various Evolutionary Population Dynamics approaches for feature selection problems. <i>Expert Systems With Applications</i> , 2022, 195, 116550.	7.6	32
67	ECG signals classification: a review. <i>International Journal of Intelligent Engineering Informatics</i> , 2017, 5, 376.	0.1	31
68	An efficient modified artificial electric field algorithm for solving optimization problems and parameter estimation of fuel cell. <i>International Journal of Energy Research</i> , 2021, 45, 20199-20218.	4.5	31
69	An Efficient Chameleon Swarm Algorithm for Economic Load Dispatch Problem. <i>Mathematics</i> , 2021, 9, 2770.	2.2	31
70	Performance of Turbulent Flow of Water Optimization on Economic Load Dispatch Problem. <i>IEEE Access</i> , 2021, 9, 77882-77893.	4.2	29
71	Evaluation comparison of some ad hoc networks routing protocols. <i>Egyptian Informatics Journal</i> , 2011, 12, 95-106.	6.8	25
72	Boosting Marine Predators Algorithm by Salp Swarm Algorithm for Multilevel Thresholding Image Segmentation. <i>Multimedia Tools and Applications</i> , 2022, 81, 16707-16742.	3.9	25

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73	Development and application of evaporation rate water cycle algorithm for optimal coordination of directional overcurrent relays. Expert Systems With Applications, 2021, 185, 115538.	7.6	24
74	Battery parameter identification strategy based on modified coot optimization algorithm. Journal of Energy Storage, 2022, 46, 103848.	8.1	24
75	Development and application of equilibrium optimizer for optimal power flow calculation of power system. Applied Intelligence, 2023, 53, 7232-7253.	5.3	24
76	Maximizing Lifetime of Wireless Sensor Networks Based on Whale Optimization Algorithm. Advances in Intelligent Systems and Computing, 2018, , 724-733.	0.6	22
77	Jaya Algorithm and Applications: A Comprehensive Review. Lecture Notes in Electrical Engineering, 2021, , 3-24.	0.4	22
78	Optimizing quantum cloning circuit parameters based on adaptive guided differential evolution algorithm. Journal of Advanced Research, 2021, 29, 147-157.	9.5	21
79	Nature-Inspired Algorithms: A Comprehensive Review. , 2019, , 1-25.		21
80	An improved seagull optimization algorithm for optimal coordination of distance and directional over-current relays. Expert Systems With Applications, 2022, 200, 116931.	7.6	21
81	A modified adaptive guided differential evolution algorithm applied to engineering applications. Engineering Applications of Artificial Intelligence, 2022, 113, 104920.	8.1	21
82	Assess deep learning models for Egyptian exchange prediction using nonlinear artificial neural networks. Neural Computing and Applications, 2021, 33, 5965-5987.	5.6	20
83	An improved marine predators algorithm for the optimal design of hybrid renewable energy systems. Engineering Applications of Artificial Intelligence, 2022, 110, 104722.	8.1	20
84	Epileptic detection based on whale optimization enhanced support vector machine. Journal of Information and Optimization Sciences, 2019, 40, 699-723.	0.3	19
85	A Hybrid EEG Signals Classification Approach Based on Grey Wolf Optimizer Enhanced SVMs for Epileptic Detection. Advances in Intelligent Systems and Computing, 2018, , 108-117.	0.6	18
86	An Efficient Chaotic Gradient-Based Optimizer for Feature Selection. IEEE Access, 2022, 10, 9271-9286.	4.2	18
87	An efficient orthogonal opposition-based learning slime mould algorithm for maximum power point tracking. Neural Computing and Applications, 2022, 34, 3671-3695.	5.6	18
88	Optimal reconfiguration strategy based on modified Runge Kutta optimizer to mitigate partial shading condition in photovoltaic systems. Energy Reports, 2022, 8, 7242-7262.	5.1	18
89	Twitter Sentiment Analysis using Deep Neural Network. , 2018, , .		17
90	A Novel Gradient Based Optimizer for Solving Unit Commitment Problem. IEEE Access, 2022, 10, 18081-18092.	4.2	17

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91	An Image Steganography Algorithm using Haar Discreet Wavelet Transform with Advanced Encryption System. , 0, , .		16
92	Predicting the concentration of sulfate using machine learning methods. Earth Science Informatics, 2022, 15, 1023-1044.	3.2	16
93	HSSAHHO: a novel hybrid Salp Swarm-Harris Hawks optimization algorithm for complex engineering problems. Journal of Ambient Intelligence and Humanized Computing, 2023, 14, 11569-11605.	4.9	15
94	Dental Age Estimation Based on X-ray images. Computers, Materials and Continua, 2020, 62, 591-605.	1.9	14
95	AntNet-RSLR: A proposed Ant routing protocol for MANETs. , 2011, , .		13
96	Particle Swarm Optimization-Enhanced Twin Support Vector Regression for Wind Speed Forecasting. Journal of Intelligent Systems, 2019, 28, 905-914.	1.6	13
97	Performance of Gradient-Based Optimizer on Charging Station Placement Problem. Mathematics, 2021, 9, 2821.	2.2	13
98	Machine Learning and Meta-heuristic Algorithms for Renewable Energy: A Systematic Review. Power Systems, 2019, , 165-187.	0.5	12
99	Data Reduction Model for Balancing Indexing and Securing Resources in the Internet-of-Things Applications. IEEE Internet of Things Journal, 2021, 8, 5953-5972.	8.7	12
100	Moth-flame Optimization Based Segmentation for MRI Liver Images. Advances in Intelligent Systems and Computing, 2018, , 320-330.	0.6	12
101	Economic Load Dispatch Problem Based on Search and Rescue Optimization Algorithm. IEEE Access, 2022, 10, 47109-47123.	4.2	12
102	An agent-based transmission model of COVID-19 for re-opening policy design. Computers in Biology and Medicine, 2022, 148, 105847.	7.0	12
103	A Survey of Metaheuristic Algorithms for Solving Optimization Problems. Studies in Computational Intelligence, 2021, , 515-543.	0.9	11
104	New Security Protocol using Hybrid Cryptography Algorithm for WSN. , 2018, , .		10
105	Long Short-Term Memory Neural Networks for RNA Viruses Mutations Prediction. Mathematical Problems in Engineering, 2021, 2021, 1-9.	1.1	10
106	Multi-level Thresholding Image Segmentation Based on Nature-Inspired Optimization Algorithms: A Comprehensive Review. Studies in Computational Intelligence, 2021, , 239-265.	0.9	10
107	Solving Multi-Objective Problems Using Bird Swarm Algorithm. IEEE Access, 2021, 9, 36382-36398.	4.2	10
108	ECG signals classification: a review. International Journal of Intelligent Engineering Informatics, 2017, 5, 376.	0.1	10

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109	Evaluating Swarm Optimization Algorithms for Segmentation of Liver Images. Studies in Computational Intelligence, 2018, , 41-62.	0.9	9
110	An efficient Equilibrium Optimizer for parameters identification of photovoltaic modules. PeerJ Computer Science, 2021, 7, e708.	4.5	9
111	Gene Selection for Microarray Cancer Classification based on Manta Rays Foraging Optimization and Support Vector Machines. Arabian Journal for Science and Engineering, 2022, 47, 2555-2572.	3.0	9
112	An Efficient Electric Charged Particles Optimization Algorithm for Numerical Optimization and Optimal Estimation of Photovoltaic Models. Mathematics, 2022, 10, 913.	2.2	9
113	Quantum Chain of Things (QCoT): A New Paradigm for Integrating Quantum Computing, Blockchain, and Internet of Things. , 2021, , .		8
114	Long-term wind speed prediction based on optimized support vector regression. , 2017, , .		7
115	EEG signals classification for epileptic detection. , 2017, , .		7
116	Forecast of wind speed based on whale optimization algorithm. , 2017, , .		7
117	An exploration-enhanced elephant herding optimization. Engineering Computations, 2019, 36, 3029-3046.	1.4	7
118	Hybrid intelligent framework for automated medical learning. Expert Systems, 2022, 39, .	4.5	7
119	Salp Swarm Algorithm: A Comprehensive Review. Studies in Computational Intelligence, 2020, , 285-308.	0.9	7
120	Parameter Identification of Optimized Fractional Maximum Power Point Tracking for Thermoelectric Generation Systems Using Manta Ray Foraging Optimization. Mathematics, 2021, 9, 2971.	2.2	7
121	Hybrid water wave optimization and support vector machine to improve EMG signal classification for neurogenic disorders. , 2017, , .		6
122	Performance analysis for similarity data fusion model for enabling time series indexing in internet of things applications. PeerJ Computer Science, 2021, 7, e500.	4.5	6
123	An Optimized Support Vector Regression Using Whale Optimization for Long Term Wind Speed Forecasting. Series in Machine Perception and Artificial Intelligence, 2018, , 171-196.	0.1	6
124	A hybrid seagull optimization algorithm for chemical descriptors classification. , 2021, , .		5
125	A Two-Stage Feature Extraction Approach for ECG Signals. Advances in Intelligent Systems and Computing, 2018, , 299-310.	0.6	5
126	Next Generation Sequence Prediction Intelligent System for SARS-COV-2 Using Deep Learning Neural Network. , 2021, , .		5

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127	Comparison of Circular Symmetric Low-Pass Digital IIR Filter Design Using Evolutionary Computation Techniques. <i>Mathematics</i> , 2020, 8, 1226.	2.2	4
128	Classification Approach for COVID-19 Gene Based on Harris Hawks Optimization. <i>Studies in Systems, Decision and Control</i> , 2021, , 575-594.	1.0	4
129	A Review of Metaheuristic Optimization Algorithms in Wireless Sensor Networks. <i>Studies in Computational Intelligence</i> , 2021, , 193-217.	0.9	4
130	COVID-19: risk prediction through nature inspired algorithm. <i>World Journal of Engineering</i> , 2020, ahead-of-print, .	1.6	4
131	A Hybrid Gray Wolf Optimization and Support Vector Machines for Detection of Epileptic Seizure. <i>Series in Machine Perception and Artificial Intelligence</i> , 2018, , 197-225.	0.1	4
132	Performance of Gradient-Based Optimizer for Optimum Wind Cube Design. <i>Computers, Materials and Continua</i> , 2022, 71, 339-353.	1.9	4
133	Bio-CAPTCHA Voice-Based Authentication Technique for Better Security and Usability in Cloud Computing. <i>International Journal of Service Science, Management, Engineering, and Technology</i> , 2020, 11, 59-79.	1.1	3
134	Opposition-based learning tunicate swarm algorithm for biomedical classification. , 2021, , .		3
135	Modified search and rescue optimization algorithm for identifying the optimal parameters of high efficiency triple-junction solar cell/module. <i>International Journal of Energy Research</i> , 2022, 46, 13961-13985.	4.5	3
136	Vortex Search Topology Control Algorithm for Wireless Sensor Networks. <i>International Journal of Intelligent Engineering and Systems</i> , 2017, 10, 87-97.	0.6	2
137	Sensor data fusion for the industrial artificial intelligence of things. <i>Expert Systems</i> , 2022, 39, .	4.5	2
138	Increasing the hiding capacity in image steganography using Braille code. <i>International Journal of Intelligent Engineering Informatics</i> , 2017, 5, 327.	0.1	1
139	Efficient Privacy Preserving of Multi-keyword Ranked Search Model over Encrypted Cloud Computing. , 2018, , .		1
140	Artificial Neural Networks for Stock Market Prediction: A Comprehensive Review. <i>Studies in Computational Intelligence</i> , 2021, , 409-444.	0.9	1
141	Security Model for Preserving Privacy over Encrypted Cloud Computing. <i>Journal of Computer and Communications</i> , 2017, 05, 149-165.	0.9	1
142	Face Age Estimation Approach based on Deep Learning and Principle Component Analysis. <i>International Journal of Advanced Computer Science and Applications</i> , 2018, 9, .	0.7	1
143	Color Image Segmentation of Fishes with Complex Background in Water. <i>Advances in Intelligent Systems and Computing</i> , 2018, , 634-643.	0.6	1
144	A Hybrid Lion Optimization Algorithm with Support Vector Machine for Liver Classification. <i>International Journal of Advanced Science and Technology</i> , 2019, 123, 1-10.	0.3	1

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145	Improving Automated Arabic Essay Questions Grading Based on Microsoft Word Dictionary. Signals and Communication Technology, 2021, , 19-40.	0.5	1
146	Area bounds of hierarchical graphs straightline grid drawing. , 2015, , .		0
147	Drug Design and Discovery: Theory, Applications, Open Issues and Challenges. Studies in Computational Intelligence, 2021, , 337-358.	0.9	0
148	Increasing the hiding capacity in image steganography using Braille code. International Journal of Intelligent Engineering Informatics, 2017, 5, 327.	0.1	0
149	Improved Models for Time Series Cluster Representation Based Dynamic Time Warping. , 2020, , .		0
150	Class Diagram Generation from Text Requirements: An Application of Natural Language Processing. Signals and Communication Technology, 2021, , 55-79.	0.5	0