

Apu Kumar Saha

List of Publications by Year in descending order

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97
papers

1,568
citations

304602

22
h-index

377752

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g-index

98
all docs

98
docs citations

98
times ranked

608
citing authors

#	ARTICLE	IF	CITATIONS
1	A hybrid whale optimization algorithm for global optimization. Journal of Ambient Intelligence and Humanized Computing, 2023, 14, 431-467.	3.3	37
2	Application of Novel MCDM for Location Selection of Surface Water Treatment Plant. IEEE Transactions on Engineering Management, 2022, 69, 1865-1877.	2.4	18
3	A novel improved symbiotic organisms search algorithm. Computational Intelligence, 2022, 38, 947-977.	2.1	25
4	Optimization of weight and cost of cantilever retaining wall by a hybrid metaheuristic algorithm. Engineering With Computers, 2022, 38, 2897-2923.	3.5	29
5	Performance up-gradation of Symbiotic Organisms Search by Backtracking Search Algorithm. Journal of Ambient Intelligence and Humanized Computing, 2022, 13, 5505-5546.	3.3	13
6	Evaluating the Preparedness of Indian States against COVID-19 Pandemic Risk: A Fuzzy Multi-criteria Decision-Making Approach. Risk Analysis, 2022, 42, 85-96.	1.5	13
7	HSWOA: An ensemble of hunger games search and whale optimization algorithm for global optimization. International Journal of Intelligent Systems, 2022, 37, 52-104.	3.3	43
8	A quantum mutation-based backtracking search algorithm. Artificial Intelligence Review, 2022, 55, 3019-3073.	9.7	20
9	Identification of Most Significant Parameter of Impact of Climate Change and Urbanization on Operational Efficiency of Hydropower Plant. , 2022, , 1320-1350.		0
10	An improved symbiotic organisms search algorithm for higher dimensional optimization problems. Knowledge-Based Systems, 2022, 236, 107779.	4.0	29
11	An enhanced moth flame optimization with mutualism scheme for function optimization. Soft Computing, 2022, 26, 2855-2882.	2.1	18
12	A Bio-Inspired Multi-Population-Based Adaptive Backtracking Search Algorithm. Cognitive Computation, 2022, 14, 900-925.	3.6	7
13	Towards the realization of regular clocking-based QCA circuits using genetic algorithm. Computers and Electrical Engineering, 2022, 97, 107640.	3.0	8
14	A novel improved whale optimization algorithm to solve numerical optimization and real-world applications. Artificial Intelligence Review, 2022, 55, 4605-4716.	9.7	38
15	Regular clocking-based Automated Cell Placement technique in QCA targeting sequential circuit. Computers and Electrical Engineering, 2022, 98, 107668.	3.0	3
16	mLBOA: A Modified Butterfly Optimization Algorithm with Lagrange Interpolation for Global Optimization. Journal of Bionic Engineering, 2022, 19, 1161-1176.	2.7	52
17	A generative adversarial network for synthetization of regions of interest based on digital mammograms. Scientific Reports, 2022, 12, 6166.	1.6	23
18	Continuous review inventory system for intuitionistic fuzzy random demand under service level constraint. Sadhana - Academy Proceedings in Engineering Sciences, 2022, 47, .	0.8	2

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19	Comparative Performance Analysis of Differential Evolution Variants on Engineering Design Problems. <i>Journal of Bionic Engineering</i> , 2022, 19, 1140-1160.	2.7	15
20	A Hybrid Moth Flame Optimization Algorithm for Global Optimization. <i>Journal of Bionic Engineering</i> , 2022, 19, 1522-1543.	2.7	31
21	Multi-population-based adaptive sine cosine algorithm with modified mutualism strategy for global optimization. <i>Knowledge-Based Systems</i> , 2022, 251, 109326.	4.0	25
22	A new TOPSIS-based approach to evaluate the economic indicators in the healthcare system and the impact of biotechnology. , 2021, , 407-419.		0
23	MPBOA - A novel hybrid butterfly optimization algorithm with symbiosis organisms search for global optimization and image segmentation. <i>Multimedia Tools and Applications</i> , 2021, 80, 12035-12076.	2.6	51
24	CFA: Toward the Realization of Conservative Full Adder in QCA with Enhanced Reliability. <i>Journal of Circuits, Systems and Computers</i> , 2021, 30, 2150172.	1.0	3
25	An efficient, scalable, regular clocking scheme based on quantum dot cellular automata. <i>Analog Integrated Circuits and Signal Processing</i> , 2021, 107, 659-670.	0.9	7
26	Systematic cell placement in quantum dot cellular automata embedding underlying regular clocking circuit. <i>IET Circuits, Devices and Systems</i> , 2021, 15, 156-167.	0.9	7
27	Regular clocking scheme based design of cost-efficient comparator in QCA. <i>Indonesian Journal of Electrical Engineering and Computer Science</i> , 2021, 21, 44.	0.7	2
28	Taylor dispersion in non-Darcy porous media with bulk chemical reaction: a model for drug transport in impeded blood vessels. <i>Journal of Engineering Mathematics</i> , 2021, 127, 1.	0.6	12
29	A novel enhanced whale optimization algorithm for global optimization. <i>Computers and Industrial Engineering</i> , 2021, 153, 107086.	3.4	116
30	CFA: Toward the Realization of Conservative Full Adder in QCA with Enhanced Reliability. <i>Journal of Circuits, Systems and Computers</i> , 2021, 30, 2192001.	1.0	1
31	Some remarks on fuzzy infi topological spaces. <i>Proyecciones</i> , 2021, 40, 399-415.	0.1	2
32	An enhanced whale optimization algorithm for large scale optimization problems. <i>Knowledge-Based Systems</i> , 2021, 233, 107543.	4.0	75
33	SHADEâ€™WOA: A metaheuristic algorithm for global optimization. <i>Applied Soft Computing Journal</i> , 2021, 113, 107866.	4.1	54
34	BOSCAâ€™A Hybrid Butterfly Optimization Algorithm Modified with Sine Cosine Algorithm. <i>Advances in Intelligent Systems and Computing</i> , 2021, , 360-372.	0.5	10
35	COVID-19 X-ray image segmentation by modified whale optimization algorithm with population reduction. <i>Computers in Biology and Medicine</i> , 2021, 139, 104984.	3.9	69
36	The hDEBSA Global Optimization Method: A Comparative Study on CEC2014 Test Function and Application to Geotechnical Problem. <i>Studies in Computational Intelligence</i> , 2021, , 225-258.	0.7	1

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37	SensMask: An Intelligent Mask for Assisting Patients during COVID-19 Emergencies. <i>Computacion Y Sistemas</i> , 2021, 25, .	0.2	3
38	Real-time monitoring of power production in modular hydropower plant: most significant parameter approach. <i>Environment, Development and Sustainability</i> , 2020, 22, 4025-4042.	2.7	6
39	Optimal location selection for installation of surface water treatment plant by Gini coefficient-based analytical hierarchy process. <i>Environment, Development and Sustainability</i> , 2020, 22, 4073-4099.	2.7	21
40	MAAS: A mobile cloud assisted architecture for handling emergency situations. <i>International Journal of Communication Systems</i> , 2020, 33, e3950.	1.6	7
41	Selection of features for analysis of reliability of performance in hydropower plants: a multi-criteria decision making approach. <i>Environment, Development and Sustainability</i> , 2020, 22, 3239-3265.	2.7	13
42	m-MBOA: a novel butterfly optimization algorithm enhanced with mutualism scheme. <i>Soft Computing</i> , 2020, 24, 4809-4827.	2.1	54
43	Effect of multiple reactions on the transport coefficients in pulsatile flow through an annulus. <i>International Communications in Heat and Mass Transfer</i> , 2020, 110, 104369.	2.9	11
44	On transport of reactive solute in a pulsatile Casson fluid flow through an annulus. <i>International Journal of Computer Mathematics</i> , 2020, 97, 2303-2319.	1.0	14
45	A new parameter setting-based modified differential evolution for function optimization. <i>International Journal of Modeling, Simulation, and Scientific Computing</i> , 2020, 11, 2050029.	0.9	5
46	AHP-TOPSIS Inspired Shopping Mall Site Selection Problem with Fuzzy Data. <i>Mathematics</i> , 2020, 8, 1380.	1.1	34
47	Mathematical model on magneto-hydrodynamic dispersion in a porous medium under the influence of bulk chemical reaction. <i>Korea Australia Rheology Journal</i> , 2020, 32, 287-299.	0.7	13
48	A Hybrid TLBO Algorithm by Quadratic Approximation for Function Optimization and Its Application. <i>Intelligent Systems Reference Library</i> , 2020, , 291-341.	1.0	7
49	hBOSOS: An Ensemble of Butterfly Optimization Algorithm and Symbiosis Organisms Search for Global Optimization. <i>Advances in Intelligent Systems and Computing</i> , 2020, , 579-588.	0.5	4
50	An Enhanced Butterfly Optimization Algorithm for Function Optimization. <i>Advances in Intelligent Systems and Computing</i> , 2020, , 593-603.	0.5	6
51	Dispersion of Reactive Species in Casson Fluid Flow. <i>Indian Journal of Pure and Applied Mathematics</i> , 2020, 51, 1451-1469.	0.3	2
52	ESTIMATION OF PRESSURE DROP FOR NON-NEWTONIAN LIQUID FLOW THROUGH BENDS USING ADAPTIVE NON-PARAMETRIC MODEL. , 2020, 47, 59-69.		3
53	Ranking of Indicators for Estimation of Plant Efficiency in Hydropower Plants by a Bootstrap MCDM Approach. <i>International Journal of Energy Optimization and Engineering</i> , 2019, 8, 69-92.	0.4	3
54	Identification of Most Significant Parameter of Impact of Climate Change and Urbanization on Operational Efficiency of Hydropower Plant. <i>International Journal of Energy Optimization and Engineering</i> , 2019, 8, 43-68.	0.4	2

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55	Location selection for Installation of Surface Water Treatment Plant by Applying a New Sinusoidal Analytical Hierarchy Process. International Journal of Energy Optimization and Engineering, 2019, 8, 20-42.	0.4	4
56	Transport of a reactive solute in a pulsatile non-Newtonian liquid flowing through an annular pipe. Journal of Engineering Mathematics, 2019, 116, 1-22.	0.6	24
57	Real time reliability monitoring of hydro-power plant by combined cognitive decision-making technique. International Journal of Energy Research, 2019, 43, 4912-4939.	2.2	16
58	Study on Temperature Stability and Fault Tolerance of Adder in Quantum-dot Cellular Automata. , 2019, , .		6
59	A novel hybrid backtracking search optimization algorithm for continuous function optimization. Decision Science Letters, 2019, , 163-174.	0.5	17
60	Hydrodynamic Dispersion of Solute under Homogeneous and Heterogeneous Reactions. International Journal of Heat and Technology, 2019, 37, 387-397.	0.3	11
61	CFD and Optimization Study of Frictional Pressure Drop Through Bends. Recent Patents on Biotechnology, 2019, 13, 74-86.	0.4	4
62	On Dispersion of a Reactive Solute in a Pulsatile Flow of a Two-Fluid Model. Journal of Applied Fluid Mechanics, 2019, 12, 987-1000.	0.4	5
63	Efficiency Assignment of Hydropower Plants by DEMATEL-MAPPAC Approach. Water Conservation Science and Engineering, 2018, 3, 91-97.	0.9	5
64	Recognising the Risk Factors of Water Treatment Plants Using a Hybrid MCDM Method. Environmental Policy and Law, 2018, 48, 74-79.	0.2	3
65	Realization of Basic Gates Using Universal Gates Using Quantum-Dot Cellular Automata. Lecture Notes in Networks and Systems, 2018, , 541-549.	0.5	9
66	Development of Financial Liability Index for Hydropower Plant with MCDM and Neuro-genetic Models. Water Resources Development and Management, 2018, , 71-105.	0.3	3
67	A new hybrid differential evolution algorithm with self-adaptation for function optimization. Applied Intelligence, 2018, 48, 1657-1671.	3.3	27
68	Prediction of Operation Efficiency of Water Treatment Plant with the Help of Multi-criteria Decision-making. Water Conservation Science and Engineering, 2018, 3, 79-90.	0.9	9
69	Unsteady Convective Diffusion with Interphase Mass Transfer in Casson Liquid. Periodica Polytechnica: Chemical Engineering, 2018, 62, 215.	0.5	8
70	Pseudodynamic Bearing Capacity Analysis of Shallow Strip Footing Using the Advanced Optimization Technique "Hybrid Symbiosis Organisms Search Algorithm" with Numerical Validation. Advances in Civil Engineering, 2018, 2018, 1-18.	0.4	6
71	Climate Change and Urbanization Impact on Hydropower Plant by Neural Network-Based Decision-Making Methods: Identification of the Most Significant Parameter. Water Conservation Science and Engineering, 2018, 3, 169-179.	0.9	5
72	Existence and Stability of Difference Equation in Imprecise Environment. Nonlinear Engineering, 2018, 7, 263-271.	1.4	6

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73	An ensemble symbiosis organisms search algorithm and its application to real world problems. Decision Science Letters, 2018, , 103-118.	0.5	25
74	A Hybrid Symbiosis Organisms Search algorithm and its application to real world problems. Memetic Computing, 2017, 9, 261-280.	2.7	34
75	Hydrodynamic dispersion of reactive solute in a Hagen-Poiseuille flow of a layered liquid. Chinese Journal of Chemical Engineering, 2017, 25, 862-873.	1.7	17
76	Dispersion phenomena of reactive solute in a pulsatile flow of three-layer liquids. Physics of Fluids, 2017, 29, .	1.6	40
77	Effect of Annealing on Optical, Electrical and Charge Trapping Properties of TiO ₂ NPs Arrays. Journal of Nanoscience and Nanotechnology, 2017, 17, 1300-1306.	0.9	5
78	Improved backtracking search algorithm for pseudo dynamic active earth pressure on retaining wall supporting c-φ backfill. Applied Soft Computing Journal, 2017, 52, 885-897.	4.1	62
79	An Optimization Model Using the Standard Deviation Method and Multiple Decision Making Statistics in Water Treatment Plants in Northeastern India. Asian Journal of Water, Environment and Pollution, 2017, 14, 27-37.	0.4	2
80	A Study on Solute Dispersion in a Three Layer Blood-like Liquid Flowing through a Rigid Artery. Periodica Polytechnica, Mechanical Engineering, 2017, 61, 173.	0.8	2
81	CFD Analysis of Non-Newtonian Pseudo Plastic Liquid Flow through Bends. Periodica Polytechnica, Mechanical Engineering, 2017, 61, 184.	0.8	2
82	On Dispersion in Oscillatory Annular Flow Driven Jointly by Pressure Pulsation and Wall Oscillation. Journal of Applied Fluid Mechanics, 2017, 10, 1487-1500.	0.4	12
83	PERFORMANCE EFFICIENCY ANALYSIS OF WATER TREATMENT PLANTS BY USING MCDM AND NEURAL NETWORK MODEL. MATTER International Journal of Science and Technology, 2017, 3, 27-35.	0.1	11
84	Intuitionistic Fuzzy Difference Equation. Advances in Computational Intelligence and Robotics Book Series, 2017, , 112-131.	0.4	1
85	CFD Analysis for Non-Newtonian Pseudo Plastic Liquid Flow Through Small Diameter U-BEND. Journal of Applied Fluid Mechanics, 2017, 10, 971-987.	0.4	1
86	Improved symbiotic organisms search algorithm for solving unconstrained function optimization. Decision Science Letters, 2016, , 361-380.	0.5	41
87	A new ensemble algorithm of differential evolution and backtracking search optimization algorithm with adaptive control parameter for function optimization. International Journal of Industrial Engineering Computations, 2016, , 323-338.	0.4	9
88	Synthesis of Biocompatible TiO ₂ Nanodots: Glancing Angle Deposition Technique. Journal of Nanoscience and Nanotechnology, 2016, 16, 8705-8710.	0.9	3
89	Retention of Charge in TiO ₂ Nanoparticles/SiO _x Thin Film System. Advanced Science Letters, 2016, 22, 141-144.	0.2	2
90	Solution of second order linear fuzzy difference equation by Lagrange's multiplier method. Journal of Soft Computing and Applications, 2016, 2016, 11-27.	0.0	5

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91	Median based conversion of SGPA into percentage by cognitive methods. Applied Mathematics and Computation, 2015, 266, 1153-1162.	1.4	0
92	Glancing angle synthesized indium nanoparticles covered TiO ₂ thin film and its structural, optoelectronic properties. Applied Physics A: Materials Science and Processing, 2015, 118, 373-379.	1.1	8
93	Parameters Optimization of Geotechnical Problem Using Different Optimization Algorithm. Geotechnical and Geological Engineering, 2015, 33, 1235-1253.	0.8	21
94	Countable Fuzzy Topological Space and Countable Fuzzy Topological Vector Space. Journal of Mathematical and Fundamental Sciences, 2015, 47, 154-166.	0.3	0
95	TiO_2 Nanoparticles Arrays Ultraviolet-A Detector With Au Schottky Contact. IEEE Photonics Technology Letters, 2014, 26, 1065-1068.	1.3	24
96	A Note on Strongly Lower Semi-Continuous Functions and the Induced Fuzzy Topological Space Generated by Them. Journal of Mathematical and Fundamental Sciences, 2013, 45, 61-82.	0.3	0
97	Regular Clocking based Emerging Technique in QCA Targeting Low Power Nano Circuit. International Journal of Electronics, 0, , 1-23.	0.9	4