

Efren Mezura-Montes

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126
papers

3,716
citations

22
h-index

59
g-index

154
ext. papers

4,407
ext. citations

3.6
avg, IF

5.88
L-index

#	Paper	IF	Citations
126	Constraint-handling in nature-inspired numerical optimization: Past, present and future. <i>Swarm and Evolutionary Computation</i> , 2011 , 1, 173-194	9.8	637
125	Constraint-handling in genetic algorithms through the use of dominance-based tournament selection. <i>Advanced Engineering Informatics</i> , 2002 , 16, 193-203	7.4	570
124	A simple multimembered evolution strategy to solve constrained optimization problems. <i>IEEE Transactions on Evolutionary Computation</i> , 2005 , 9, 1-17	15.6	406
123	A comparative study of differential evolution variants for global optimization 2006 ,		307
122	An empirical study about the usefulness of evolution strategies to solve constrained optimization problems. <i>International Journal of General Systems</i> , 2008 , 37, 443-473	2.1	284
121	Differential evolution in constrained numerical optimization: An empirical study. <i>Information Sciences</i> , 2010 , 180, 4223-4262	7.7	128
120	Handling constraints using multiobjective optimization concepts. <i>International Journal for Numerical Methods in Engineering</i> , 2004 , 59, 1989-2017	2.4	121
119	Multiobjective Evolutionary Algorithms in Aeronautical and Aerospace Engineering. <i>IEEE Transactions on Evolutionary Computation</i> , 2012 , 16, 662-694	15.6	95
118	Multiple trial vectors in differential evolution for engineering design. <i>Engineering Optimization</i> , 2007 , 39, 567-589	2	84
117	Multi-objective Optimization Using Differential Evolution: A Survey of the State-of-the-Art. <i>Studies in Computational Intelligence</i> , 2008 , 173-196	0.8	81
116	Empirical analysis of a modified Artificial Bee Colony for constrained numerical optimization. <i>Applied Mathematics and Computation</i> , 2012 , 218, 10943-10973	2.7	76
115	Useful Infeasible Solutions in Engineering Optimization with Evolutionary Algorithms. <i>Lecture Notes in Computer Science</i> , 2005 , 652-662	0.9	61
114	Constrained Optimization via Multiobjective Evolutionary Algorithms 2008 , 53-75		41
113	Self-adaptive mix of particle swarm methodologies for constrained optimization. <i>Information Sciences</i> , 2014 , 277, 216-233	7.7	40
112	Promising infeasibility and multiple offspring incorporated to differential evolution for constrained optimization 2005 ,		38
111	Simple Feasibility Rules and Differential Evolution for Constrained Optimization. <i>Lecture Notes in Computer Science</i> , 2004 , 707-716	0.9	34
110	Handling Constraints in Genetic Algorithms Using Dominance-based Tournaments 2002 , 273-284		29

109	Structured Population Size Reduction Differential Evolution with Multiple Mutation Strategies on CEC 2013 real parameter optimization 2013 ,		28
108	Multi-objective meta-heuristic optimization in intelligent control: A survey on the controller tuning problem. <i>Applied Soft Computing Journal</i> , 2020 , 93, 106342	7.5	26
107	Elitist Artificial Bee Colony for constrained real-parameter optimization 2010 ,		26
106	Parameter control in Differential Evolution for constrained optimization 2009 ,		24
105	Self-adaptive and Deterministic Parameter Control in Differential Evolution for Constrained Optimization. <i>Studies in Computational Intelligence</i> , 2009 , 95-120	0.8	24
104	Metaheuristics to solve grouping problems: A review and a case study. <i>Swarm and Evolutionary Computation</i> , 2020 , 53, 100643	9.8	22
103	Comparing bio-inspired algorithms in constrained optimization problems 2007 ,		20
102	Real Parameter Single Objective Optimization using self-adaptive differential evolution algorithm with more strategies 2013 ,		19
101	Improved multi-objective clustering with automatic determination of the number of clusters. <i>Neural Computing and Applications</i> , 2017 , 28, 2255-2275	4.8	18
100	Parametric reconfiguration improvement in non-iterative concurrent mechatronic design using an evolutionary-based approach. <i>Engineering Applications of Artificial Intelligence</i> , 2011 , 24, 757-771	7.2	18
99	Adding a diversity mechanism to a simple evolution strategy to solve constrained optimization problems		18
98	Integration of structure and control using an evolutionary approach: an application to the optimal concurrent design of a CVT. <i>International Journal for Numerical Methods in Engineering</i> , 2007 , 71, 883-907	1.4	15
97	Application of time series discretization using evolutionary programming for classification of precancerous cervical lesions. <i>Journal of Biomedical Informatics</i> , 2014 , 49, 73-83	10.2	14
96	Optimum synthesis of a four-bar mechanism using the modified bacterial foraging algorithm. <i>International Journal of Systems Science</i> , 2014 , 45, 1080-1100	2.3	14
95	Improved Particle Swarm Optimization in Constrained Numerical Search Spaces. <i>Studies in Computational Intelligence</i> , 2009 , 299-332	0.8	14
94	Constraint-handling techniques in surrogate-assisted evolutionary optimization. An empirical study. <i>Applied Soft Computing Journal</i> , 2018 , 73, 215-229	7.5	14
93	Multi-objective airfoil shape optimization using a multiple-surrogate approach 2012 ,		12
92	Evolutionary programming for the length minimization of addition chains. <i>Engineering Applications of Artificial Intelligence</i> , 2015 , 37, 125-134	7.2	11

91	Differential evolution with combined variants for dynamic constrained optimization 2014 ,		11
90	Variation Operators for Grouping Genetic Algorithms: A Review. <i>Swarm and Evolutionary Computation</i> , 2021 , 60, 100796	9.8	11
89	Corner detection of intensity images with cellular neural networks (CNN) and evolutionary techniques. <i>Neurocomputing</i> , 2019 , 347, 82-93	5.4	10
88	Smart flight and dynamic tolerances in the artificial bee colony for constrained optimization 2010 ,		10
87	A Combination of Specialized Differential Evolution Variants for Constrained Optimization. <i>Lecture Notes in Computer Science</i> , 2012 , 261-270	0.9	10
86	A Genetic Algorithm with repair and local search mechanisms able to find minimal length addition chains for small exponents 2009 ,		10
85	An Improved Diversity Mechanism for Solving Constrained Optimization Problems Using a Multimembered Evolution Strategy. <i>Lecture Notes in Computer Science</i> , 2004 , 700-712	0.9	10
84	Constraint-Handling Techniques for the Concurrent Design of a Five-Bar Parallel Robot. <i>IEEE Access</i> , 2017 , 5, 23010-23021	3.5	9
83	Evolutionary Algorithms Applied to Multi-Objective Aerodynamic Shape Optimization. <i>Studies in Computational Intelligence</i> , 2011 , 211-240	0.8	9
82	MODE-LD+SS: A novel Differential Evolution algorithm incorporating local dominance and scalar selection mechanisms for multi-objective optimization 2010 ,		9
81	Two-Swim Operators in the Modified Bacterial Foraging Algorithm for the Optimal Synthesis of Four-Bar Mechanisms. <i>Computational Intelligence and Neuroscience</i> , 2016 , 2016, 4525294	3	9
80	A Simple Evolution Strategy to Solve Constrained Optimization Problems. <i>Lecture Notes in Computer Science</i> , 2003 , 640-641	0.9	9
79	An Experimental Comparison of Multiobjective Algorithms: NSGA-II and OMOPSO 2010 ,		8
78	Addition chain length minimization with evolutionary programming 2011 ,		8
77	A cost-benefit local search coordination in multimeme differential evolution for constrained numerical optimization problems. <i>Swarm and Evolutionary Computation</i> , 2018 , 39, 249-266	9.8	8
76	A local cooperative approach to solve large-scale constrained optimization problems. <i>Swarm and Evolutionary Computation</i> , 2019 , 51, 100577	9.8	7
75	A Repair Method for Differential Evolution with Combined Variants to Solve Dynamic Constrained Optimization Problems 2015 ,		7
74	Immune Generalized Differential Evolution for dynamic multi-objective environments: An empirical study. <i>Knowledge-Based Systems</i> , 2018 , 142, 192-219	7.3	7

73	Multiobjective-based concepts to handle constraints in evolutionary algorithms		7
72	Feature selection to detect fallen pose using depth images 2016,		7
71	Memetic differential evolution for constrained numerical optimization problems 2013,		6
70	A Graph-Theory-Based Method for Topological and Dimensional Representation of Planar Mechanisms as a Computational Tool for Engineering Design. <i>IEEE Access</i> , 2019 , 7, 587-596	3.5	6
69	A permutational-based Differential Evolution algorithm for feature subset selection. <i>Pattern Recognition Letters</i> , 2020 , 133, 86-93	4.7	5
68	Surrogate-Assisted Differential Evolution with an Adaptive Evolution Control Based on Feasibility to Solve Constrained Optimization Problems. <i>Advances in Intelligent Systems and Computing</i> , 2016 , 809-822	0.4	5
67	A hybrid version of differential evolution with two differential mutation operators applied by stages 2013,		5
66	Adaptation and local search in the modified bacterial foraging algorithm for constrained optimization 2012,		5
65	A Preliminary Study of Fitness Inheritance in Evolutionary Constrained Optimization. <i>Studies in Computational Intelligence</i> , 2008 , 1-14	0.8	5
64	On the Use of Semantics in Multi-objective Genetic Programming. <i>Lecture Notes in Computer Science</i> , 2016 , 353-363	0.9	5
63	A Comparison of Constraint Handling Techniques for Dynamic Constrained Optimization Problems 2018,		5
62	Differential evolution based adaptation for the direct current motor velocity control parameters. <i>Mathematics and Computers in Simulation</i> , 2018 , 150, 122-141	3.3	4
61	Particle Swarm Optimizer for constrained optimization 2013,		4
60	Empirical study of bound constraint-handling methods in Particle Swarm Optimization for constrained search spaces 2017,		4
59	A novel boundary constraint-handling technique for constrained numerical optimization problems 2015,		4
58	Improved Modified Bacterial Foraging Optimization Algorithm to Solve Constrained Numerical Optimization Problems. <i>Applied Mathematics and Information Sciences</i> , 2016 , 10, 607-622	2.4	4
57	A modified brain storm optimization algorithm with a special operator to solve constrained optimization problems. <i>Applied Intelligence</i> , 2020 , 50, 4145-4161	4.9	4
56	A New Evolutionary Optimization Method Based on Center of Mass. <i>Asset Analytics</i> , 2019 , 65-74	0.3	4

55	Adaptive Controller Tuning Method Based on Online Multiobjective Optimization: A Case Study of the Four-Bar Mechanism. <i>IEEE Transactions on Cybernetics</i> , 2021 , 51, 1272-1285	10.2	4
54	Data-Driven Bayesian Network Learning: A Bi-Objective Approach to Address the Bias-Variance Decomposition. <i>Mathematical and Computational Applications</i> , 2020 , 25, 37	1	3
53	A multi-breakpoints approach for symbolic discretization of time series. <i>Knowledge and Information Systems</i> , 2020 , 62, 2795-2834	2.4	3
52	Dynamic differential evolution with combined variants and a repair method to solve dynamic constrained optimization problems: an empirical study. <i>Soft Computing</i> , 2018 , 22, 541-570	3.5	3
51	Approximated algorithms for the minimum dilation triangulation problem. <i>Journal of Heuristics</i> , 2014 , 20, 189-209	1.9	3
50	The baldwin effect on a memetic differential evolution for constrained numerical optimization problems 2017 ,		3
49	Immune generalized differential evolution for dynamic multiobjective optimization problems 2015 ,		3
48	An image registration method for colposcopic images. <i>Computational and Mathematical Methods in Medicine</i> , 2013 , 2013, 285962	2.8	3
47	Induction of decision trees as classification models through metaheuristics. <i>Swarm and Evolutionary Computation</i> , 2021 , 101006	9.8	3
46	Times Series Discretization Using Evolutionary Programming. <i>Lecture Notes in Computer Science</i> , 2011 , 225-234	0.9	3
45	Feature Selection on 2D and 3D Geometric Features to Improve Facial Expression Recognition. <i>Sensors</i> , 2020 , 20,	3.8	3
44	A study of constraint-handling techniques in brain storm optimization 2016 ,		3
43	An Improved Centroid-Based Boundary Constraint-Handling Method in Differential Evolution for Constrained Optimization. <i>International Journal of Pattern Recognition and Artificial Intelligence</i> , 2017 , 31, 1759023	1.1	2
42	Differential Evolution with a Repair Method to Solve Dynamic Constrained Optimization Problems 2015 ,		2
41	Evolutionary Multi-Objective Energy Production Optimization: An Empirical Comparison. <i>Mathematical and Computational Applications</i> , 2020 , 25, 32	1	2
40	Adaptive boundary constraint-handling scheme for constrained optimization. <i>Soft Computing</i> , 2019 , 23, 8247-8280	3.5	2
39	A review of the bacterial foraging algorithm in constrained numerical optimization 2013 ,		2
38	An experimental comparison of two constraint handling approaches used with differential evolution 2017 ,		2

37	How good is crude MDL for solving the bias-variance dilemma? An empirical investigation based on Bayesian networks. <i>PLoS ONE</i> , 2014 , 9, e92866	3.7	2
36	2014 ,		2
35	An empirical comparison of two crossover operators in real-coded genetic algorithms for constrained numerical optimization problems 2014 ,		2
34	Dynamic adaptation and multiobjective concepts in a particle swarm optimizer for constrained optimization 2008 ,		2
33	Saving evaluations in differential evolution for constrained optimization		2
32	A surrogate-assisted metaheuristic for bilevel optimization 2020 ,		2
31	Looking Inside Particle Swarm Optimization in Constrained Search Spaces. <i>Lecture Notes in Computer Science</i> , 2008 , 451-461	0.9	2
30	Elitistic Evolution: An Efficient Heuristic for Global Optimization. <i>Lecture Notes in Computer Science</i> , 2009 , 171-182	0.9	2
29	Evolution of Generative Adversarial Networks Using PSO for Synthesis of COVID-19 Chest X-ray Images 2021 ,		2
28	Cervical image segmentation using active contours and evolutionary programming over temporary acetowhite patterns 2016 ,		2
27	Discriminative learning of bayesian network parameters by differential evolution. <i>Applied Mathematical Modelling</i> , 2021 , 93, 244-256	4.5	2
26	A multi-objective genetic algorithm to find active modules in multiplex biological networks. <i>PLoS Computational Biology</i> , 2021 , 17, e1009263	5	2
25	2017 ,		1
24	Differential Evolution in Robust Optimization Over Time Using a Survival Time Approach. <i>Mathematical and Computational Applications</i> , 2020 , 25, 72	1	1
23	An adaptive symbolic discretization scheme for the classification of temporal datasets using NSGA-II 2017 ,		1
22	Towards the Full Model Selection in temporal databases by using micro-differential evolution. An empirical study 2015 ,		1
21	Stepsize control on the modified bacterial foraging algorithm for constrained numerical optimization 2014 ,		1
20	Memetic Modified Artificial Bee Colony for constrained optimization 2014 ,		1

19	An ant system with steps counter for the job shop scheduling problem 2007 ,		1
18	An Evolutionary Approach to Solve a Novel Mechatronic Multiobjective Optimization Problem 2007 , 329-351		1
17	Robotic Behavior Implementation Using Two Different Differential Evolution Variants. <i>Lecture Notes in Computer Science</i> , 2013 , 216-226	0.9	1
16	A Review on Convolutional Neural Networks Encodings for Neuroevolution. <i>IEEE Transactions on Evolutionary Computation</i> , 2021 , 1-1	15.6	1
15	A Diversity Promotion Study in Constrained Optimizations 2018 ,		1
14	Automated parameter tuning as a bilevel optimization problem solved by a surrogate-assisted population-based approach. <i>Applied Intelligence</i> , 2021 , 51, 5978-6000	4.9	1
13	Classification of colposcopic images using a multi-breakpoints discretization approach on temporal patterns. <i>Biomedical Signal Processing and Control</i> , 2021 , 69, 102918	4.9	0
12	Variable Decomposition for Large-Scale Constrained Optimization Problems Using a Grouping Genetic Algorithm. <i>Mathematical and Computational Applications</i> , 2022 , 27, 23	1	0
11	Requirements and GitHub Issues: An Automated Approach for Quality Requirements Classification. <i>Programming and Computer Software</i> , 2021 , 47, 704-721	0.8	0
10	A metaheuristic for a numerical approximation to the mass transfer problem. <i>International Journal of Applied Mathematics and Computer Science</i> , 2016 , 26, 757-766	1.7	
9	Deterministic Parameter Control in Differential Evolution with Combined Variants for Constrained Search Spaces. <i>Studies in Computational Intelligence</i> , 2019 , 3-28	0.8	
8	Towards a Quantitative Identification of Mobile Social Media UIDPs\Visual Features Using a Combination of Digital Image Processing and Machine Learning Techniques. <i>Studies in Computational Intelligence</i> , 2020 , 659-674	0.8	
7	pMODE-LD+SS: An Effective and Efficient Parallel Differential Evolution Algorithm for Multi-Objective Optimization 2010 , 21-30		
6	Preface to the special issue on data science in dynamics and control. <i>International Journal of Dynamics and Control</i> , 2020 , 8, 1053-1053	1.7	
5	A regression tree predictive model for virtual machine startup time in IaaS clouds. <i>Cluster Computing</i> , 2021 , 24, 1217-1233	2.1	
4	Neuroevolution for Sentiment Analysis in Tweets Written in Mexican Spanish. <i>Lecture Notes in Computer Science</i> , 2021 , 101-110	0.9	
3	Smart Grid Optimization with the Advanced jSO Algorithm. <i>Communications in Computer and Information Science</i> , 2021 , 171-181	0.3	
2	Full Model Selection Problem and Pipelines for Time-Series Databases: Contrasting Population-Based and Single-point Search Metaheuristics. <i>Ingeniería E Investigación</i> , 2021 , 41, e79308	0.3	

- 1 Pseudo-feasible solutions in evolutionary bilevel optimization: Test problems and performance assessment. *Applied Mathematics and Computation*, **2022**, 412, 126577 2.7