Oliver Schutze

List of Publications by Year
in descending order

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Version: 2024-02-01

97	2,342	318942	252626
papers	citations	23 h-index	46 g-index

102	102	102	1595
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Towards fast approximations for the hypervolume indicator for multi-objective optimization problems by Genetic Programming. Applied Soft Computing Journal, 2022, 125, 109103.	4.1	8
2	A Bounded Archiver for Hausdorff Approximations of the Pareto Front for Multi-Objective Evolutionary Algorithms. Mathematical and Computational Applications, 2022, 27, 48.	0.7	1
3	A new gradient free local search mechanism for constrained multi-objective optimization problems. Swarm and Evolutionary Computation, 2021, 67, 100938.	4.5	7
4	The Set-Based Hypervolume Newton Method for Bi-Objective Optimization. IEEE Transactions on Cybernetics, 2020, 50, 2186-2196.	6.2	16
5	Pareto Explorer: a global/local exploration tool for many-objective optimization problems. Engineering Optimization, 2020, 52, 832-855.	1.5	20
6	On the efficient computation and use of multi-objective descent directions within constrained MOEAs. Swarm and Evolutionary Computation, 2020, 52, 100617.	4.5	12
7	A benchmark for equality constrained multi-objective optimization. Swarm and Evolutionary Computation, 2020, 52, 100619.	4.5	28
8	Automatic model selection for fully connected neural networks. International Journal of Dynamics and Control, 2020, 8, 1063-1079.	1.5	15
9	Numerical Computation of Lightly Multi-Objective Robust Optimal Solutions by Means of Generalized Cell Mapping. Mathematics, 2020, 8, 1959.	1.1	2
10	The Pareto Tracer for General Inequality Constrained Multi-Objective Optimization Problems. Mathematical and Computational Applications, 2020, 25, 80.	0.7	3
11	Pareto Explorer for Finding the Knee for Many Objective Optimization Problems. Mathematics, 2020, 8, 1651.	1.1	15
12	A Set Based Newton Method for the Averaged Hausdorff Distance for Multi-Objective Reference Set Problems. Mathematics, 2020, 8, 1822.	1.1	2
13	A New Hybrid Evolutionary Algorithm for the Treatment of Equality Constrained MOPs. Mathematics, 2020, 8, 7.	1.1	20
14	Non-Epsilon Dominated Evolutionary Algorithm for the Set of Approximate Solutions. Mathematical and Computational Applications, 2020, 25, 3.	0.7	4
15	Dataset on a Benchmark for Equality Constrained Multi-objective Optimization. Data in Brief, 2020, 29, 105130.	0.5	2
16	Using gradient-free local search within MOEAs for the treatment of constrained MOPs. , 2020, , .		0
17	The Gradient Subspace Approximation and Its Application to Bi-objective Optimization Problems. Studies in Systems, Decision and Control, 2020, , 355-390.	0.8	2
18	Variation Rate to Maintain Diversity in Decision Space within Multi-Objective Evolutionary Algorithms. Mathematical and Computational Applications, 2019, 24, 82.	0.7	4

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19	The Averaged Hausdorff Distances in
Multi-Objective Optimization: A Review. Mathematics, 2019, 7, 894.	1.1	21
20	A neural network-evolutionary computational framework for remaining useful life estimation of mechanical systems. Neural Networks, 2019, 116, 178-187.	3.3	42
21	A New Hybrid Metaheuristic for Equality Constrained Bi-objective Optimization Problems. Lecture Notes in Computer Science, 2019, , 53-65.	1.0	1
22	Multi-objective and many objective design of plastic injection molding process. International Journal of Advanced Manufacturing Technology, 2019, 102, 3165-3180.	1.5	27
23	On the choice of neighborhood sampling to build effective search operators for constrained MOPs. Memetic Computing, 2019, 11, 155-173.	2.7	5
24	Enhanced directed search: a continuation method for mixed-integer multi-objective optimization problems. Annals of Operations Research, 2019, 279, 343-365.	2.6	4
25	Comparison of a genetic programming approach with ANFIS for power amplifier behavioral modeling and FPGA implementation. Soft Computing, 2019, 23, 2463-2481.	2.1	10
26	Variation Rate: An Alternative to Maintain Diversity in Decision Space for Multi-objective Evolutionary Algorithms. Lecture Notes in Computer Science, 2019, , 203-215.	1.0	1
27	Toward a New Family of Hybrid Evolutionary Algorithms. Lecture Notes in Computer Science, 2019, , 78-90.	1.0	0
28	A (p,q)-Averaged Hausdorff Distance for Arbitrary Measurable Sets. Mathematical and Computational Applications, 2018, 23, 51.	0.7	15
29	Local Search is Underused in Genetic Programming. Genetic and Evolutionary Computation, 2018, , 119-137.	1.0	15
30	Pareto Tracer: a predictorâ€“corrector method for multi-objective optimization problems. Engineering Optimization, 2018, 50, 516-536.	1.5	33
31	Multi-objective optimal design of sliding mode control with parallel simple cell mapping method. JVC/Journal of Vibration and Control, 2017, 23, 46-54.	1.5	20
32	A hybrid method of evolutionary algorithm and simple cell mapping for multi-objective optimization problems. International Journal of Dynamics and Control, 2017, 5, 570-582.	1.5	11
33	Global Multi-objective Optimization by Means of Cell Mapping Techniques. Studies in Computational Intelligence, 2017, , 25-56.	0.7	5
34	Optimizing the location of ambulances in Tijuana, Mexico. Computers in Biology and Medicine, 2017, 80, 107-115.	3.9	40
35	Many-Objective Optimal and Robust Design of Proportional-Integral-Derivative Controls With a State Observer. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2017, 139, .	0.9	3
36	Gradient subspace approximation: a direct search method for memetic computing. Soft Computing, 2017, 21, 6331-6350.	2.1	20

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37	The Directed Search Method for Unconstrained Parameter Dependent Multi-objective Optimization Problems. Studies in Computational Intelligence, 2017, , 281-330.	0.7	1
38	RDS-NSGA-II: a memetic algorithm for reference point based multi-objective optimization. Engineering Optimization, 2017, 49, 828-845.	1.5	20
39	A hybrid evolutionary algorithm and cell mapping method for multi-objective optimization problems. , 2017, , .		1
40	Multi-objective Optimal Design of Nonlinear Controls. Studies in Computational Intelligence, 2017, , 205-222.	0.7	2
41	An Approach for the Local Exploration of Discrete Many Objective Optimization Problems. Lecture Notes in Computer Science, 2017, , 135-150.	1.0	4
42	A local exploration tool for linear many objective optimization problems. , 2016, , .		1
43	An effective mutation operator to deal with multi-objective constrained problems: SPM. , 2016, , .		1
44	On the Closest Averaged Hausdorff Archive for a Circularly Convex Pareto Front. Lecture Notes in Computer Science, 2016, , 42-55.	1.0	1
45	Parallel simple cell mapping for multi-objective optimization. Engineering Optimization, 2016, 48, 1845-1868.	1.5	14
46	A scalar optimization approach for averaged Hausdorff approximations of the Pareto front. Engineering Optimization, 2016, 48, 1593-1617.	1.5	12
47	The hypervolume based directed search method for multi-objective optimization problems. Journal of Heuristics, 2016, 22, 273-300.	1.1	14
48	Optimal averaged Hausdorff archives for bi-objective problems: theoretical and numerical results. Computational Optimization and Applications, 2016, 64, 589-618.	0.9	40
49	Finding zeros of nonlinear functions using the hybrid parallel cell mapping method. Communications in Nonlinear Science and Numerical Simulation, 2016, 34, 23-37.	1.7	16
50	The directed search method for multi-objective memetic algorithms. Computational Optimization and Applications, 2016, 63, 305-332.	0.9	41
51	Multi-Objective Optimal Design and Validation of Sliding Mode Control. , 2015, , .		1
52	Parallel Cell Mapping Method for Global Analysis of High-Dimensional Nonlinear Dynamical Systems1. Journal of Applied Mechanics, Transactions ASME, 2015, 82, .	1.1	50
53	Solving the ambulance location problem in Tijuana-Mexico using a continuous location model. , 2015, , .		2
54	Multi-objective optimal design of feedback controls for dynamical systems with hybrid simple cell mapping algorithm. Communications in Nonlinear Science and Numerical Simulation, 2014, 19, 1465-1473.	1.7	35

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55	PSA Based Multi Objective Evolutionary Algorithms. Studies in Computational Intelligence, 2014, , 233-259.	0.7	3
56	Parallel Cell Mapping for Unconstrained Multi-Objective Optimization Problems. Advances in Intelligent Systems and Computing, 2014, , 133-146.	0.5	4
57	A New Predictor Corrector Variant for Unconstrained Bi-objective Optimization Problems. Advances in Intelligent Systems and Computing, 2014, , 165-179.	0.5	5
58	A Memetic Variant of R-NSGA-II for Reference Point Problems. Advances in Intelligent Systems and Computing, 2014, , 247-260.	0.5	2
59	Cell Mapping Techniques for Exploratory Landscape Analysis. Advances in Intelligent Systems and Computing, 2014, , 115-131.	0.5	21
60	An Aspiration Set EMOA Based on Averaged Hausdorff Distances. Lecture Notes in Computer Science, 2014, , 153-156.	1.0	10
61	Simple cell mapping method for multi-objective optimal feedback control design. International Journal of Dynamics and Control, 2013, 1, 231-238.	1.5	62
62	Directed search method for indicator-based multi-objective evolutionary algorithms. , 2013, , .		1
63	A Hybrid Algorithm for the Simple Cell Mapping Method in Multi-objective Optimization. Advances in Intelligent Systems and Computing, 2013, , 207-223.	0.5	14
64	A multi-objective optimal PID control for a nonlinear system with time delay. Theoretical and Applied Mechanics Letters, 2013, 3, 063006.	1.3	8
65	Evenly spaced Pareto fronts of quad-objective problems using PSA partitioning technique. , 2013, , .		11
66	Computing the Set of Approximate Solutions of a Multi-objective Optimization Problem by Means of Cell Mapping Techniques. Advances in Intelligent Systems and Computing, 2013, , 171-188.	0.5	9
67	The Gradient Free Directed Search Method as Local Search within Multi-Objective Evolutionary Algorithms. Advances in Intelligent Systems and Computing, 2013, , 153-168.	0.5	13
68	PSA â€“ A New Scalable Space Partition Based Selection Algorithm for MOEAs. Advances in Intelligent Systems and Computing, 2013, , 137-151.	0.5	11
69	Set Oriented Methods for the Numerical Treatment of Multiobjective Optimization Problems. Studies in Computational Intelligence, 2013, , 187-219.	0.7	21
70	Evenly Spaced Pareto Front Approximations for Tricriteria Problems Based on Triangulation. Lecture Notes in Computer Science, 2013, , 443-458.	1.0	16
71	Handling high-dimensional problems with multi-objective continuation methods via successive approximation of the tangent space. Engineering Optimization, 2012, 44, 1117-1146.	1.5	24
72	Homogene Approximation der Paretofront bei mehrkriteriellen Kontrollproblemen. Automatisierungstechnik, 2012, 60, 612-621.	0.4	3

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73	Using the Averaged Hausdorff Distance as a Performance Measure in Evolutionary Multiobjective Optimization. IEEE Transactions on Evolutionary Computation, 2012, 16, 504-522.	7.5	508
74	Multilevel Subdivision Techniques for Scalar Optimization Problems. , 2012, , 221-252.		0
75	Fitness function evaluation for the detection of multiple ellipses using a genetic algorithm. , 2011, , .		3
76	On the Influence of the Number of Objectives on the Hardness of a Multiobjective Optimization Problem. IEEE Transactions on Evolutionary Computation, 2011, 15, 444-455.	7.5	191
77	Computing the Set of Epsilon-Efficient Solutions in Multiobjective Space Mission Design. Journal of Aerospace Computing, Information, and Communication, 2011, 8, 53-70.	0.8	63
78	HCS: A New Local Search Strategy for Memetic Multiobjective Evolutionary Algorithms. IEEE Transactions on Evolutionary Computation, 2010, 14, 112-132.	7.5	163
79	Computing approximate solutions of scalar optimization problems and applications in space mission design. , 2010, , .		0
80	A painless gradient-assisted multi-objective memetic mechanism for solving continuous bi-objective optimization problems. , 2010, , .		5
81	Computing Gap Free Pareto Front Approximations with Stochastic Search Algorithms. Evolutionary Computation, 2010, 18, 65-96.	2.3	57
82	On the interplay of generator and archiver within archive based multiobjective evolutionary algorithms. , 2010, , .		2
83	A predictor corrector method for the computation of boundary points of a multi-objective optimization problem. , 2010, , .		7
84	Computing and Selecting Îµ-Efficient Solutions of {0, 1}-Knapsack Problems. Lecture Notes in Economics and Mathematical Systems, 2010, , 379-389.	0.3	3
85	A multi-objective approach to the design of low thrust space trajectories using optimal control. Celestial Mechanics and Dynamical Astronomy, 2009, 105, 33-59.	0.5	24
86	Direct Calibration by Fitting of Cuboids to a Single Image Using Differential Evolution. International Journal of Computer Vision, 2009, 81, 119-127.	10.9	13
87	An Analysis of the Effect of Multiple Layers in the Multi-Objective Design of Conducting Polymer Composites. Materials and Manufacturing Processes, 2009, 24, 350-357.	2.7	14
88	Designing optimal low-thrust gravity-assist trajectories using space pruning and a multi-objective approach. Engineering Optimization, 2009, 41, 155-181.	1.5	53
89	Convergence of stochastic search algorithms to finite size pareto set approximations. Journal of Global Optimization, 2008, 41, 559-577.	1.1	54
90	New analysis of the optimization of electromagnetic shielding properties using conducting polymers and a multiâ€objective approach. Polymers for Advanced Technologies, 2008, 19, 762-769.	1.6	16

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91	Hybridizing evolutionary strategies with continuation methods for solving multi-objective problems. Engineering Optimization, 2008, 40, 383-402.	1.5	40
92	Convergence of stochastic search algorithms to gap-free pareto front approximations. , 2007, , .		19
93	A Memetic PSO Algorithm for Scalar Optimization Problems. , 2007, , .		13
94	Approximating the Îµ-Efficient Set of an MOP with Stochastic Search Algorithms. Lecture Notes in Computer Science, 2007, , 128-138.	1.0	11
95	Covering Pareto Sets by Multilevel Evolutionary Subdivision Techniques. Lecture Notes in Computer Science, 2003, , 118-132.	1.0	41
96	Finding zeros by multilevel subdivision techniques. IMA Journal of Numerical Analysis, 2002, 22, 167-185.	1.5	25
97	Locating all the zeros of an analytic function in one complex variable. Journal of Computational and Applied Mathematics, 2002, 138, 325-333.	1.1	59