

Hans-Georg Beyer

List of Publications by Year in descending order

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106
papers

6,491
citations

201575

27
h-index

76872

74
g-index

112
all docs

112
docs citations

112
times ranked

4034
citing authors

#	ARTICLE	IF	CITATIONS
1	A matrix adaptation evolution strategy for optimization on general quadratic manifolds. , 2021, , .		2
2	On the steady state analysis of covariance matrix self-adaptation evolution strategies on the noisy ellipsoid model. Theoretical Computer Science, 2020, 832, 98-122.	0.5	7
3	Analysis of the $(\hat{1}/4/\hat{1}/4, \hat{1})$ -CSA-ES with Repair by Projection Applied to a Conically Constrained Problem. Evolutionary Computation, 2020, 28, 463-488.	2.3	1
4	A Modified Matrix Adaptation Evolution Strategy with Restarts for Constrained Real-World Problems. , 2020, , .		21
5	Matrix adaptation evolution strategies for optimization under nonlinear equality constraints. Swarm and Evolutionary Computation, 2020, 54, 100653.	4.5	6
6	Design principles for matrix adaptation evolution strategies. , 2020, , .		1
7	Large Scale Black-Box Optimization by Limited-Memory Matrix Adaptation. IEEE Transactions on Evolutionary Computation, 2019, 23, 353-358.	7.5	37
8	Analysis of the $(\hat{1}/4/\hat{1}/4, \hat{1})$ -lf-Self-Adaptation Evolution Strategy with Repair by Projection Applied to a Conically Constrained Problem. IEEE Transactions on Evolutionary Computation, 2019, , 1-1.	7.5	0
9	Comparison of contemporary evolutionary algorithms on the rotated Klee-Minty problem. , 2019, , .		2
10	Analysis of a meta-ES on a conically constrained problem. , 2019, , .		1
11	Steady state analysis of a multi-recombinative meta-ES on a conically constrained problem with comparison to σ SA and CSA. , 2019, , .		0
12	Analysis of the $(1, \hat{1})$ -lf-Self-Adaptation Evolution Strategy with repair by projection applied to a conically constrained problem. Theoretical Computer Science, 2019, 785, 30-45.	0.5	1
13	A multi-recombinative active matrix adaptation evolution strategy for constrained optimization. Soft Computing, 2019, 23, 6847-6869.	2.1	9
14	A Covariance Matrix Self-Adaptation Evolution Strategy for Optimization Under Linear Constraints. IEEE Transactions on Evolutionary Computation, 2019, 23, 514-524.	7.5	30
15	Benchmarking evolutionary algorithms for single objective real-valued constrained optimization â€“ A critical review. Swarm and Evolutionary Computation, 2019, 44, 927-944.	4.5	46
16	A Matrix Adaptation Evolution Strategy for Constrained Real-Parameter Optimization. , 2018, , .		41
17	A Simple Approach for Constrained Optimization - An Evolution Strategy that Evolves Rays. , 2018, , .		0
18	A Linear Constrained Optimization Benchmark for Probabilistic Search Algorithms: The Rotated Klee-Minty Problem. Lecture Notes in Computer Science, 2018, , 139-151.	1.0	1

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19	Toward a Steady-State Analysis of an Evolution Strategy on a Robust Optimization Problem With Noise-Induced Multimodality. IEEE Transactions on Evolutionary Computation, 2017, 21, 629-643.	7.5	12
20	Simplify Your Covariance Matrix Adaptation Evolution Strategy. IEEE Transactions on Evolutionary Computation, 2017, 21, 746-759.	7.5	76
21	Analysis of the pcCMSA-ES on the noisy ellipsoid model. , 2017, , .		3
22	Mutation strength control via meta evolution strategies on the ellipsoid model. Theoretical Computer Science, 2016, 623, 160-179.	0.5	5
23	The Dynamics of Cumulative Step Size Adaptation on the Ellipsoid Model. Evolutionary Computation, 2016, 24, 25-57.	2.3	15
24	Evolution Under Strong Noise: A Self-Adaptive Evolution Strategy Can Reach the Lower Performance Bound - The pcCMSA-ES. Lecture Notes in Computer Science, 2016, , 26-36.	1.0	19
25	Towards an Analysis of Self-Adaptive Evolution Strategies on the Noisy Ellipsoid Model. , 2015, , .		2
26	Convergence Analysis of Evolutionary Algorithms That Are Based on the Paradigm of Information Geometry. Evolutionary Computation, 2014, 22, 679-709.	2.3	36
27	Optimization of multiconductor transmission line parameters using constrained evolution strategies. , 2014, , .		3
28	The Dynamics of Self-Adaptive Multirecombinant Evolution Strategies on the General Ellipsoid Model. IEEE Transactions on Evolutionary Computation, 2014, 18, 764-778.	7.5	20
29	Evolution on trees: On the design of an evolution strategy for scenario-based multi-period portfolio optimization under transaction costs. Swarm and Evolutionary Computation, 2014, 17, 74-87.	4.5	9
30	Controlling population size and mutation strength by Meta-ES under fitness noise. , 2013, , .		2
31	Mutation strength control by meta-ES on the sharp ridge. , 2012, , .		7
32	On the Design of Constraint Covariance Matrix Self-Adaptation Evolution Strategies Including a Cardinality Constraint. IEEE Transactions on Evolutionary Computation, 2012, 16, 578-596.	7.5	25
33	Erratum to "On the Design of Constraint Covariance Matrix Self-Adaptation Evolution Strategies Including a Cardinality Constraint" [Aug 12 578-596]. IEEE Transactions on Evolutionary Computation, 2012, 16, 752-752.	7.5	0
34	Performance analysis of the simultaneous perturbation stochastic approximation algorithm on the noisy sphere model. Theoretical Computer Science, 2012, 419, 50-72.	0.5	4
35	The Dynamical Systems Approach " Progress Measures and Convergence Properties. , 2012, , 741-814.		8
36	HappyCat " A Simple Function Class Where Well-Known Direct Search Algorithms Do Fail. Lecture Notes in Computer Science, 2012, , 367-376.	1.0	10

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37	Noisy optimization. , 2011, , .		7
38	Performance of the $(\mu/\mu_{\lambda})\sigma_{SA}$ -ES on a Class of PDQFs. IEEE Transactions on Evolutionary Computation, 2010, 14, 400-418.	7.5	9
39	Benchmarking SPSA on BBOB-2010 noisy function testbed. , 2010, , .		1
40	On the Behaviour of Evolution Strategies Optimising Cigar Functions. Evolutionary Computation, 2010, 18, 661-682.	2.3	7
41	Benchmarking CMA-EGS on the BBOB 2010 noiseless function testbed. , 2010, , .		0
42	Benchmarking CMA-EGS on the BBOB 2010 noisy function testbed. , 2010, , .		0
43	Benchmarking SPSA on BBOB-2010 noiseless function testbed. , 2010, , .		0
44	On the analysis of self-adaptive evolution strategies on elliptic model. , 2010, , .		3
45	On strategy parameter control by Meta-ES. , 2009, , .		4
46	On the behaviour of weighted multi-recombination evolution strategies optimising noisy cigar functions. , 2009, , .		4
47	Weighted recombination evolution strategy on a class of PDQF's. , 2009, , .		2
48	Evolution strategies with cumulative step length adaptation on the noisy parabolic ridge. Natural Computing, 2008, 7, 555-587.	1.8	16
49	On the performance of evolution strategies on noisy PDQFs: Progress rate analysis. , 2008, , .		2
50	Why noise may be good. , 2008, , .		8
51	Mutative λ -self-adaptation can beat cumulative step size adaptation when using weighted recombination. , 2008, , .		2
52	Covariance Matrix Adaptation Revisited – The CMSA Evolution Strategy –. Lecture Notes in Computer Science, 2008, , 123-132.	1.0	81
53	λ -Self-Adaptive Weighted Multirecombination Evolution Strategy with Scaled Weights on the Noisy Sphere. Lecture Notes in Computer Science, 2008, , 11-20.	1.0	1
54	Evolutionary Algorithms in the Presence of Noise: To Sample or Not to Sample. , 2007, , .		12

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55	Robust optimization – A comprehensive survey. Computer Methods in Applied Mechanics and Engineering, 2007, 196, 3190-3218.	3.4	1,221
56	Self-Adaptation in Evolutionary Algorithms. , 2007, , 47-75.		107
57	Mutative Self-adaptation on the Sharp and Parabolic Ridge. Lecture Notes in Computer Science, 2007, , 70-96.	1.0	6
58	Evolution strategies. Scholarpedia Journal, 2007, 2, 1965.	0.3	36
59	A general noise model and its effects on evolution strategy performance. IEEE Transactions on Evolutionary Computation, 2006, 10, 380-391.	7.5	59
60	Functions with noise-induced multimodality: a test for evolutionary robust Optimization-properties and performance analysis. IEEE Transactions on Evolutionary Computation, 2006, 10, 507-526.	7.5	23
61	Self-adaptation of evolution strategies under noisy fitness evaluations. Genetic Programming and Evolvable Machines, 2006, 7, 295-328.	1.5	17
62	Optimum Tracking with Evolution Strategies. Evolutionary Computation, 2006, 14, 291-308.	2.3	27
63	Self-adaptation on the Ridge Function Class: First Results for the Sharp Ridge. Lecture Notes in Computer Science, 2006, , 72-81.	1.0	2
64	On the Prediction of the Solution Quality in Noisy Optimization. Lecture Notes in Computer Science, 2005, , 238-259.	1.0	1
65	Expected sample moments of concomitants of selected order statistics. Statistics and Computing, 2005, 15, 241-250.	0.8	4
66	A New Approach for Predicting the Final Outcome of Evolution Strategy Optimization Under Noise. Genetic Programming and Evolvable Machines, 2005, 6, 7-24.	1.5	17
67	On the Impact of Systematic Noise on the Evolutionary Optimization Performance – A Sphere Model Analysis. Genetic Programming and Evolvable Machines, 2004, 5, 327-360.	1.5	14
68	Performance Analysis of Evolutionary Optimization With Cumulative Step Length Adaptation. IEEE Transactions on Automatic Control, 2004, 49, 617-622.	3.6	43
69	Actuator Noise in Recombinant Evolution Strategies on General Quadratic Fitness Models. Lecture Notes in Computer Science, 2004, , 654-665.	1.0	8
70	On the Quality Gain of (1,λ)-ES Under Fitness Noise. Lecture Notes in Computer Science, 2004, , 1-10.	1.0	3
71	THE INFLUENCE OF STOCHASTIC QUALITY FUNCTIONS ON EVOLUTIONARY SEARCH. Advances in Natural Computation, 2004, , 152-172.	0.1	12
72	A Comparison of Evolution Strategies with Other Direct Search Methods in the Presence of Noise. Computational Optimization and Applications, 2003, 24, 135-159.	0.9	79

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73	Qualms Regarding the Optimality of Cumulative Path Length Control in CSA/CMA-Evolution Strategies. Evolutionary Computation, 2003, 11, 19-28.	2.3	33
74	On the Benefits of Populations for Noisy Optimization. Evolutionary Computation, 2003, 11, 111-127.	2.3	26
75	The Steady State Behavior of $(\hat{1}/4/\hat{1}/4, \hat{1})$ -ES on Ellipsoidal Fitness Models Disturbed by Noise. Lecture Notes in Computer Science, 2003, , 525-536.	1.0	8
76	On the Effects of Outliers on Evolutionary Optimization. Lecture Notes in Computer Science, 2003, , 151-160.	1.0	9
77	Local performance of the $(1 + 1)$ -ES in a noisy environment. IEEE Transactions on Evolutionary Computation, 2002, 6, 30-41.	7.5	57
78	Performance analysis of evolution strategies with multi-recombination in high-dimensional RN-search spaces disturbed by noise. Theoretical Computer Science, 2002, 289, 629-647.	0.5	32
79	How to analyse evolutionary algorithms. Theoretical Computer Science, 2002, 287, 101-130.	0.5	94
80	Evolution strategies "A comprehensive introduction. Natural Computing, 2002, 1, 3-52.	1.8	1,930
81	Random Dynamics Optimum Tracking with Evolution Strategies. Lecture Notes in Computer Science, 2002, , 3-12.	1.0	22
82	Self-Adaptive Genetic Algorithms with Simulated Binary Crossover. Evolutionary Computation, 2001, 9, 197-221.	2.3	302
83	On self-adaptive features in real-parameter evolutionary algorithms. IEEE Transactions on Evolutionary Computation, 2001, 5, 250-270.	7.5	203
84	Local Performance of the $(\hat{1}/4/\hat{1}/4, \hat{1})$ -ES in a Noisy Environment. , 2001, , 127-141.		33
85	The Theory of Evolution Strategies. Natural Computing Series, 2001, , .	2.2	516
86	Concepts for the Analysis of the ES. Natural Computing Series, 2001, , 25-50.	2.2	0
87	Do Evolutionary Processes Minimize Expected Losses?. Journal of Theoretical Biology, 2000, 207, 117-123.	0.8	8
88	Evolutionary algorithms in noisy environments: theoretical issues and guidelines for practice. Computer Methods in Applied Mechanics and Engineering, 2000, 186, 239-267.	3.4	203
89	Analysis of the $(1, \hat{1})$ -ES on the Parabolic Ridge. Evolutionary Computation, 2000, 8, 249-265.	2.3	27
90	Analysis of the $(\hat{1}/4/\hat{1}/4, \hat{1})$ -ES on the Parabolic Ridge. Evolutionary Computation, 2000, 8, 267-289.	2.3	20

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91	On the Desired Behaviors of Self-Adaptive Evolutionary Algorithms. Lecture Notes in Computer Science, 2000, , 59-68.	1.0	8
92	Efficiency and Mutation Strength Adaptation of the $(\frac{1}{4}, \frac{1}{4}, \lambda)$ -ES in a Noisy Environment. Lecture Notes in Computer Science, 2000, , 39-48.	1.0	17
93	On the "Explorative power" of ES/EP-like algorithms. Lecture Notes in Computer Science, 1998, , 323-334.	1.0	21
94	Mutate large, but inherit small! On the analysis of rescaled mutations in $(\frac{1}{4}, \lambda)$ ETQq0 0 0 rgBT/Overlock 10 Tf 50	1.0	13
95	Where elitists start limping evolution strategies at ridge functions. Lecture Notes in Computer Science, 1998, , 34-43.	1.0	11
96	The dynamics of evolution strategies in the optimization of traveling salesman problems. Lecture Notes in Computer Science, 1997, , 347-359.	1.0	3
97	An alternative explanation for the manner in which genetic algorithms operate. BioSystems, 1997, 41, 1-15.	0.9	57
98	On the asymptotic behavior of multirecombinant Evolution Strategies. Lecture Notes in Computer Science, 1996, , 122-133.	1.0	4
99	A Note on the Empirical Evaluation of Intermediate Recombination. Evolutionary Computation, 1995, 3, 491-495.	2.3	45
100	Toward a Theory of Evolution Strategies: On the Benefits of Sex" the $(\frac{1}{4}, \frac{1}{4}, \lambda)$ Theory. Evolutionary Computation, 1995, 3, 81-111.	2.3	129
101	Toward a Theory of Evolution Strategies: Self-Adaptation. Evolutionary Computation, 1995, 3, 311-347.	2.3	166
102	Toward a Theory of Evolution Strategies: The $(\frac{1}{4}, \lambda)$ -Theory. Evolutionary Computation, 1994, 2, 381-407.	2.3	67
103	Towards a theory of "evolution strategies"™: Results for $(1, \lambda)$ -strategies on (nearly) arbitrary fitness functions. Lecture Notes in Computer Science, 1994, , 57-67.	1.0	10
104	Toward a Theory of Evolution Strategies: Some Asymptotical Results from the $(1, \lambda)$ ETQq0 0 0 rgBT/Overlock 10 Tf 50	2.3	108
105	Local performance measures. , 0, , .		2
106	Design optimization of a linear accelerator using evolution strategy: Solving a TSP-like optimization problem. , 0, , .		0