David E Goldberg

List of Publications by Year
in descending order

105 papers	6,102 citations	125106 35 h-index	97045 71 g-index
112 all docs	112 docs citations	112 times ranked	3540 citing authors

#	Article	IF	Citations
1	Model accuracy in the Bayesian optimization algorithm. Soft Computing, 2011, 15, 1351-1371.	2.1	23
2	The Emotional Rescue of Engineering Education. , 2010, , .		0
3	Scaling eCGA model building via data-intensive computing. , 2010, , .		19
4	When Huge Is Routine: Scaling Genetic Algorithms and Estimation of Distribution Algorithms via Data-Intensive Computing. Studies in Computational Intelligence, 2010, , 11-41.	0.7	9
5	The importance of pairwork in interdisciplinary and educational initiatives. , 2009, , .		0
6	Binary Representation in Gene Expression Programming: Towards a Better Scalability. , 2009, , .		0
7	Dependency Structure Matrix, Genetic Algorithms, and Effective Recombination. Evolutionary Computation, 2009, 17, 595-626.	2.3	78
8	Effects of a deterministic hill climber on hBOA. , 2009, , .		6
9	Performance of evolutionary algorithms on NK landscapes with nearest neighbor interactions and tunable overlap. , 2009, , .		34
10	Scaling Genetic Algorithms Using MapReduce. , 2009, , .		125
11	The innovation pump: supporting creative processes in collaborative engineering. International Journal of Collaborative Engineering, 2009, 1, 75.	0.4	0
12	Loopy Substructural Local Search for the Bayesian Optimization Algorithm. Lecture Notes in Computer Science, 2009, , 61-75.	1.0	16
13	Sporadic model building for efficiency enhancement of the hierarchical BOA. Genetic Programming and Evolvable Machines, 2008, 9, 53-84.	1.5	26
14	Design of microvascular flow networks using multi-objective genetic algorithms. Computer Methods in Applied Mechanics and Engineering, 2008, 197, 4399-4410.	3.4	58
15	Real-Coded ECGA for Solving Decomposable Real-Valued Optimization Problems. Studies in Computational Intelligence, 2008, , 61-86.	0.7	4
16	Linkage Learning Accuracy in the Bayesian Optimization Algorithm. Studies in Computational Intelligence, 2008, , 87-107.	0.7	1
17	Meandre: Semantic-Driven Data-Intensive Flows in the Clouds. , 2008, , .		39
18	Using previous models to bias structural learning in the hierarchical BOA. , 2008, , .		29

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19	iBOA. , 2008, , .		24
20	The Crowding Approach to Niching in Genetic Algorithms. Evolutionary Computation, 2008, 16, 315-354.	2.3	91
21	Real-Coded Extended Compact Genetic Algorithm Based on Mixtures of Models. Studies in Computational Intelligence, 2008, , 335-358.	0.7	10
22	Linkage Learning, Rule Representation, and the Ï‡-Ary Extended Compact Classifier System. Lecture Notes in Computer Science, 2008, , 189-205.	1.0	3
23	Optimization of Semiempirical Quantum Chemistry Methods via Multiobjective Genetic Algorithms: Accurate Photodynamics for Larger Molecules and Longer Time Scales. Materials and Manufacturing Processes, 2007, 22, 553-561.	2.7	20
24	Let's get ready to rumble redux. , 2007, , .		4
25	Empirical analysis of ideal recombination on random decomposable problems. , 2007, , .		5
26	Performance Analyses of Factorization Based on Gaussian PDF In rECGA. , 2007, , .		0
27	Modeling selection pressure in XCS for proportionate and tournament selection. , 2007, , .		9
28	Towards billion-bit optimization via a parallel estimation of distribution algorithm. , 2007, , .		41
29	Influence of selection and replacement strategies on linkage learning in BOA. , 2007, , .		39
30	Population Sizing to Go: Online Adaptation Using Noise and Substructural Measurements. , 2007, , 205-223.		3
31	Real-coded ECGA for Solving Decomposable Real-Valued Optimization Problems. , 2007, , .		2
32	Scalability of a Hybrid Extended Compact Genetic Algorithm for Ground State Optimization of Clusters. Materials and Manufacturing Processes, 2007, 22, 570-576.	2.7	25
33	Evolutionary Algorithm for Large Scale Problems. , 2007, , .		2
34	Toward routine billion-variable optimization using genetic algorithms. Complexity, 2007, 12, 27-29.	0.9	28
35	An information theoretic method for developing modular architectures using genetic algorithms. Research in Engineering Design - Theory, Applications, and Concurrent Engineering, 2007, 18, 91-109.	1.2	160
36	Problem solution sustenance in XCS: Markov chain analysis of niche support distributions and the impact on computational complexity. Genetic Programming and Evolvable Machines, 2007, 8, 5-37.	1.5	16

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37	Communication Gap Management for Fertile Community. Soft Computing, 2007, 11, 791-798.	2.1	4
38	Real-coded Bayesian Optimization Algorithm. Studies in Fuzziness and Soft Computing, 2006, , 51-73.	0.6	6
39	Military antenna design using simple and competent genetic algorithms. Mathematical and Computer Modelling, 2006, 43, 990-1022.	2.0	24
40	Multiobjective genetic algorithms for multiscaling excited state direct dynamics in photochemistry. , 2006, , .		4
41	Automated Global Structure Extraction for Effective Local Building Block Processing in XCS. Evolutionary Computation, 2006, 14, 345-380.	2.3	46
42	Fluctuating crosstalk, deterministic noise, and GA scalability. , 2006, , .		2
43	Sporadic model building for efficiency enhancement of hierarchical BOA. , 2006, , .		14
44	Substructural Neighborhoods for Local Search in the Bayesian Optimization Algorithm. Lecture Notes in Computer Science, 2006, , 232-241.	1.0	27
45	Performance of Evolutionary Algorithms on Random Decomposable Problems. Lecture Notes in Computer Science, 2006, , 788-797.	1.0	12
46	Hierarchical Bayesian Optimization Algorithm. Studies in Computational Intelligence, 2006, , 63-90.	0.7	30
47	Efficiency Enhancement of Estimation of Distribution Algorithms. Studies in Computational Intelligence, 2006, , 161-185.	0.7	17
48	Fluctuating Crosstalk as a Source of Deterministic Noise and Its Effects on GA Scalability. Lecture Notes in Computer Science, 2006, , 740-751.	1.0	2
49	Real-coded Bayesian Optimization Algorithm. , 2006, , 51-73.		0
50	Strong, Stable, and Reliable Fitness Pressure in XCS due to Tournament Selection. Genetic Programming and Evolvable Machines, 2005, 6, 53-77.	1.5	37
51	Adaptive Hybrid Genetic Algorithm for Groundwater Remediation Design. Journal of Water Resources Planning and Management - ASCE, 2005, 131, 14-24.	1.3	67
52	Sub-structural niching in estimation of distribution algorithms. , 2005, , .		17
53	Quality-time analysis of multi-objective evolutionary algorithms. , 2005, , .		0
54	Combating user fatigue in iGAs. , 2005, , .		69

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55	Efficient Genetic Algorithms Using Discretization Scheduling. Evolutionary Computation, 2005, 13, 353-385.	2.3	1
56	Population Sizing for Genetic Programming Based on Decision-Making. , 2005, , 49-65.		4
57	Genetic programming for multitimescale modeling. Physical Review B, 2005, 72, .	1.1	34
58	Convergence Time for the Linkage Learning Genetic Algorithm. Evolutionary Computation, 2005, 13, 279-302.	2.3	19
59	Designing Efficient Genetic and Evolutionary Algorithm Hybrids. , 2005, , 259-288.		9
60	Designing Competent Mutation Operators Via Probabilistic Model Building of Neighborhoods. Lecture Notes in Computer Science, 2004, , 114-125.	1.0	44
61	Inducing Sequentiality Using Grammatical Genetic Codes. Lecture Notes in Computer Science, 2004, , 1426-1437.	1.0	6
62	Introducing Subchromosome Representations to the Linkage Learning Genetic Algorithm. Lecture Notes in Computer Science, 2004, , 971-982.	1.0	2
63	Dependency Structure Matrix Analysis: Offline Utility of the Dependency Structure Matrix Genetic Algorithm. Lecture Notes in Computer Science, 2004, , 355-366.	1.0	11
64	Letâ€™s Get Ready to Rumble: Crossover Versus Mutation Head to Head. Lecture Notes in Computer Science, 2004, , 126-137.	1.0	31
65	Knowledge Extraction and Problem Structure Identification in XCS. Lecture Notes in Computer Science, 2004, , 1051-1060.	1.0	10
66	A hierarchy machine: Learning to optimize from nature and humans. Complexity, 2003, 8, 36-45.	0.9	39
67	Getting the best of both worlds: Discrete and continuous genetic and evolutionary algorithms in concert. Information Sciences, 2003, 156, 147-171.	4.0	28
68	Simplifying multiobjective optimization: An automated design methodology for the nondominated sorted genetic algorithm-II. Water Resources Research, 2003, 39, .	1.7	102
69	Genetic Algorithm Design Inspired by Organizational Theory: Pilot Study of a Dependency Structure Matrix Driven Genetic Algorithm. Lecture Notes in Computer Science, 2003, , 1620-1621.	1.0	40
70	Tournament Selection: Stable Fitness Pressure in XCS. Lecture Notes in Computer Science, 2003, , 1857-1869.	1.0	32
71	Analysis and Improvement of Fitness Exploitation in XCS: Bounding Models, Tournament Selection, and Bilateral Accuracy. Evolutionary Computation, 2003, 11, 239-277.	2.3	105
72	Redundant Representations in Evolutionary Computation. Evolutionary Computation, 2003, 11, 381-415.	2.3	142

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73	A Genetic Algorithm for Developing Modular Product Architectures. , 2003, , 515.		48
74	Performance Evaluation and Population Reduction for a Self Adaptive Hybrid Genetic Algorithm (SAHGA). Lecture Notes in Computer Science, 2003, , 922-933.	1.0	7
75	Are Multiple Runs of Genetic Algorithms Better than One?. Lecture Notes in Computer Science, 2003, , 801-812.	1.0	29
76	Tightness Time for the Linkage Learning Genetic Algorithm. Lecture Notes in Computer Science, 2003, , 837-849.	1.0	5
77	Hierarchical BOA Solves Ising Spin Glasses and MAXSAT. Lecture Notes in Computer Science, 2003, , 1271-1282.	1.0	55
78	Scalability of Selectorecombinative Genetic Algorithms for Problems with Tight Linkage. Lecture Notes in Computer Science, 2003, , 1332-1344.	1.0	3
79	Towards Building Block Propagation in XCS: A Negative Result and Its Implications. Lecture Notes in Computer Science, 2003, , 1906-1917.	1.0	3
80	Probabilistic Model Building and Competent Genetic Programming. , 2003, , 205-220.		75
81	Discovering Deep Building Blocks for Competent Genetic Algorithms Using Chance Discovery via KeyGraphs. , 2003, , 276-301.		15
82	Optimal Sampling and Speed-Up for Genetic Algorithms on the Sampled OneMax Problem. Lecture Notes in Computer Science, 2003, , 1554-1565.	1.0	4
83	The Design of Innovation. Genetic Algorithms and Evolutionary Computation, 2002, , .	0.3	469
84	Scalability of the Bayesian optimization algorithm. International Journal of Approximate Reasoning, 2002, 31, 221-258.	1.9	94
85	Network Random Keysâ€"A Tree Representation Scheme for Genetic and Evolutionary Algorithms. Evolutionary Computation, 2002, 10, 75-97.	2.3	89
86	A Survey of Optimization by Building and Using Probabilistic Models. Computational Optimization and Applications, 2002, 21, 5-20.	0.9	531
87	Efficient parallel genetic algorithms: theory and practice. Computer Methods in Applied Mechanics and Engineering, 2000, 186, 221-238.	3.4	127
88	Risk-based in situ bioremediation design using a noisy genetic algorithm. Water Resources Research, 2000, 36, 3043-3052.	1.7	123
89	Designing a competent simple genetic algorithm for search and optimization. Water Resources Research, 2000, 36, 3757-3761.	1.7	154
90	Linkage Problem, Distribution Estimation, and Bayesian Networks. Evolutionary Computation, 2000, 8, 311-340.	2.3	235

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91	What Is a Learning Classifier System?. Lecture Notes in Computer Science, 2000, , 3-32.	1.0	75
92	Linkage Identification by Non-monotonicity Detection for Overlapping Functions. Evolutionary Computation, 1999, 7, 377-398.	2.3	95
93	The Gambler's Ruin Problem, Genetic Algorithms, and the Sizing of Populations. Evolutionary Computation, 1999, 7, 231-253.	2.3	242
94	A timing analysis of convergence to fitness sharing equilibrium. Lecture Notes in Computer Science, 1998, , 23-33.	1.0	4
95	Genetic Algorithms, Selection Schemes, and the Varying Effects of Noise. Evolutionary Computation, 1996, 4, 113-131.	2.3	282
96	Parallel recombinative simulated annealing: A genetic algorithm. Parallel Computing, 1995, 21, 1-28.	1.3	261
97	Genetic Algorithm Difficulty and the Modality of Fitness Landscapes. Foundations of Genetic Algorithms, 1995, 3, 243-269.	0.6	70
98	Genetic and evolutionary algorithms come of age. Communications of the ACM, 1994, 37, 113-119.	3.3	273
99	Implicit Niching in a Learning Classifier System: Nature's Way. Evolutionary Computation, 1994, 2, 37-66.	2.3	98
100	Sufficient conditions for deceptive and easy binary functions. Annals of Mathematics and Artificial Intelligence, 1994, 10, 385-408.	0.9	107
101	Long path problems. Lecture Notes in Computer Science, 1994, , 149-158.	1.0	72
102	Analyzing Deception in Trap Functions. Foundations of Genetic Algorithms, 1993, 2, 93-108.	0.6	110
103	Adaptive Default Hierarchy Formation. Applied Artificial Intelligence, 1992, 6, 79-102.	2.0	16
104	Construction of high-order deceptive functions using low-order Walsh coefficients. Annals of Mathematics and Artificial Intelligence, 1992, 5, 35-47.	0.9	35
105	Probability matching, the magnitude of reinforcement, and classifier system bidding. Machine Learning, 1990, 5, 407-425.	3.4	98