Erik David Goodman

List of Publications by Citations

121 papers	1,802 citations	23 h-index	38 g-index
146 ext. papers	2,384 ext. citations	4.1 avg, IF	5.28 L-index

#	Paper	IF	Citations
121	Predicting conserved water-mediated and polar ligand interactions in proteins using a K-nearest-neighbors genetic algorithm. *Journal of Molecular Biology*, **1997**, 265, 445-64	6.5	149
120	NSGA-Net **2019**,		114
119	Toward A Model of Detritus Processing in a Woodland Stream. *Ecology*, **1975**, 56, 141-151	4.6	101
118	Push and pull search for solving constrained multi-objective optimization problems. *Swarm and Evolutionary Computation*, **2019**, 44, 665-679	9.8	99
117	An improved epsilon constraint-handling method in MOEA/D for CMOPs with large infeasible regions. *Soft Computing*, **2019**, 23, 12491-12510	3.5	61
116	Toward a unified and automated design methodology for multi-domain dynamic systems using bond graphs and genetic programming. *Mechatronics*, **2003**, 13, 851-885	3	59
115	The hierarchical fair competition (HFC) framework for sustainable evolutionary algorithms. *Evolutionary Computation*, **2005**, 13, 241-77	4.3	59
114	Generalization of Pareto-Optimality for Many-Objective Evolutionary Optimization. *IEEE Transactions on Evolutionary Computation*, **2016**, 20, 299-315	15.6	53
113	MOEA/D with angle-based constrained dominance principle for constrained multi-objective optimization problems. *Applied Soft Computing Journal*, **2019**, 74, 621-633	7.5	52
112	Integrating a statistical background-foreground extraction algorithm and SVM classifier for pedestrian detection and tracking. *Integrated Computer-Aided Engineering*, **2013**, 20, 201-216	5.2	45
111	Automatic Tobacco Plant Detection in UAV Images via Deep Neural Networks. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, **2018**, 11, 876-887	4.7	42
110	Decomposition-based evolutionary dynamic multiobjective optimization using a difference model. *Applied Soft Computing Journal*, **2019**, 76, 473-490	7.5	34
109	Epileptic seizure detection using genetically programmed artificial features. *IEEE Transactions on Biomedical Engineering*, **2007**, 54, 212-24	5	33
108	. *IEEE Transactions on Evolutionary Computation*, **2021**, 25, 277-291	15.6	32
107	A novel non-dominated sorting algorithm for evolutionary multi-objective optimization. *Journal of Computational Science*, **2017**, 23, 31-43	3.4	31
106	Approximating a multi-dimensional Pareto front for a land use management problem: A modified MOEA with an epigenetic silencing metaphor **2012**,		31
105	Evolutionary Dynamic Multiobjective Optimization Assisted by a Support Vector Regression Predictor. *IEEE Transactions on Evolutionary Computation*, **2020**, 24, 305-319	15.6	31

104	A neighbor-based learning particle swarm optimizer with short-term and long-term memory for dynamic optimization problems. *Information Sciences*, **2018**, 453, 463-485	7.7	27
103	Difficulty Adjustable and Scalable Constrained Multiobjective Test Problem Toolkit. *Evolutionary Computation*, **2020**, 28, 339-378	4.3	27
102	Evaluation of Injection Island GA Performance on Flywheel Design Optimisation **1998**, 121-136		27
101	Improving the performance of genetic algorithms for land-use allocation problems. *International Journal of Geographical Information Science*, **2018**, 32, 907-930	4.1	25
100	Optimal design of flywheels using an injection island genetic algorithm. *Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM*, **1999**, 13, 327-340	1.3	23
99	NSGANetV2: Evolutionary Multi-objective Surrogate-Assisted Neural Architecture Search. *Lecture Notes in Computer Science*, **2020**, 35-51	0.9	23
98	A novel evolutionary engineering design approach for mixed-domain systems. *Engineering Optimization*, **2004**, 36, 127-147	2	21
97	Computation of Optimal Workpiece Orientation for Multi-axis NC Machining of Sculptured Part Surfaces. *Journal of Mechanical Design, Transactions of the ASME*, **2002**, 124, 201-212	3	21
96	Illumination-Robust Foreground Detection in a Video Surveillance System. *IEEE Transactions on Circuits and Systems for Video Technology*, **2013**, 23, 1637-1650	6.4	20
95	A survey of evolutionary algorithms using metameric representations. *Genetic Programming and Evolvable Machines*, **2019**, 20, 441-478	2	19
94	Structured synthesis of MEMS using evolutionary approaches. *Applied Soft Computing Journal*, **2008** , 8, 579-589	7.5	19
93	Digitization and visualization of greenhouse tomato plants in indoor environments. *Sensors*, **2015**, 15, 4019-51	3.8	18
92	Solving metameric variable-length optimization problems using genetic algorithms. *Genetic Programming and Evolvable Machines*, **2017**, 18, 247-277	2	18
91	Open-ended robust design of analog filters using genetic programming **2005**,		17
90	Evolutionary multi-objective automatic clustering enhanced with quality metrics and ensemble strategy. *Knowledge-Based Systems*, **2020**, 188, 105018	7.3	17
89	Greenhouse climate fuzzy adaptive control considering energy saving. *International Journal of Control, Automation and Systems*, **2017**, 15, 1936-1948	2.9	15
88	NSGA-II-based nonlinear PID controller tuning of greenhouse climate for reducing costs and improving performances. *Neural Computing and Applications*, **2014**, 24, 927-936	4.8	15
87	Genetic Programming-Based Automatic Gait Generation in Joint Space for a Quadruped Robot. *Advanced Robotics*, **2010**, 24, 2199-2214	1.7	15

86	System-Level Synthesis of MEMS via Genetic Programming and Bond Graphs. *Lecture Notes in Computer Science*, **2003**, 2058-2071	0.9	15
85	A model of mercury contamination in a woodland stream. *Ecological Modelling*, **1982**, 15, 1-28	3	14
84	Reducing the loss of agricultural productivity due to compact urban development in municipalities of Switzerland. *Computers, Environment and Urban Systems*, **2017**, 65, 162-177	5.9	13
83	On Prediction of Epileptic Seizures by Computing Multiple Genetic Programming Artificial Features. *Lecture Notes in Computer Science*, **2005**, 321-330	0.9	13
82	Adaptive walking control of biped robots using online trajectory generation method based on neural oscillators. *Journal of Bionic Engineering*, **2016**, 13, 572-584	2.7	12
81	Neural Architecture Transfer. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, **2021**, 43, 2971-2989	13.3	12
80	Handling multi-objective optimization problems with unbalanced constraints and their effects on evolutionary algorithm performance. *Swarm and Evolutionary Computation*, **2020**, 55, 100676	9.8	11
79	On prediction of epileptic seizures by means of genetic programming artificial features. *Annals of Biomedical Engineering*, **2006**, 34, 515-29	4.7	11
78	Using multi-objective optimization to secure fertile soils across municipalities. *Applied Geography*, **2018**, 97, 75-84	4.4	10
77	Modeling the Tracking Area Planning Problem Using an Evolutionary Multi-Objective Algorithm. *IEEE Computational Intelligence Magazine*, **2017**, 12, 29-41	5.6	9
76	A new dominance-relation metric balancing convergence and diversity in multi- and many-objective optimization. *Expert Systems With Applications*, **2019**, 134, 14-27	7.8	9
75	Triple Bottomline Many-Objective-Based Decision Making for a Land Use Management Problem. *Journal of Multi-Criteria Decision Analysis*, **2015**, 22, 133-159	1.9	9
74	Cooperative body-Brain coevolutionary synthesis of mechatronic systems. *Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM*, **2008**, 22, 219-234	1.3	9
73	A Guiding Evolutionary Algorithm with Greedy Strategy for Global Optimization Problems. *Computational Intelligence and Neuroscience*, **2016**, 2016, 2565809	3	9
72	Continuous Hierarchical Fair Competition Model for Sustainable Innovation in Genetic Programming **2003**, 81-98		9
71	Investigating the Effect of Imbalance Between Convergence and Diversity in Evolutionary Multiobjective Algorithms. *IEEE Transactions on Evolutionary Computation*, **2016**, 1-1	15.6	8
70	Automated synthesis of mechanical vibration absorbers using genetic programming. *Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM*, **2008**, 22, 207-217	1.3	8
69	Robust and Efficient Genetic Algorithms with Hierarchical Niching and a Sustainable Evolutionary Computation Model. *Lecture Notes in Computer Science*, **2004**, 1220-1232	0.9	8

68	A collaboration-based particle swarm optimizer with history-guided estimation for optimization in dynamic environments. *Expert Systems With Applications*, **2019**, 120, 1-13	7.8	8
67	Nearly dynamic programming NN-approximation based optimal control for greenhouse climate: A simulation study. *Optimal Control Applications and Methods*, **2018**, 39, 638-662	1.7	7
66	Introduction to genetic algorithms **2014**,		7
65	Exploring Open-Ended Design Space of Mechatronic Systems. *International Journal of Advanced Robotic Systems*, **2004**, 1, 24	1.4	7
64	Genetic programming artificial features with applications to epileptic seizure prediction. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, **2005**, 2005, 4510-3		7
63	A Large-scale Bi-objective Optimization of Solid Rocket Motors Using Innovization **2020**,		7
62	An adaptive memetic framework for multi-objective combinatorial optimization problems: studies on software next release and travelling salesman problems. *Soft Computing*, **2017**, 21, 2215-2236	3.5	6
61	A Cooperative Evolutionary Framework Based on an Improved Version of Directed Weight Vectors for Constrained Multiobjective Optimization With Deceptive Constraints. *IEEE Transactions on Cybernetics*, **2021**, 51, 5546-5558	10.2	6
60	Time and Individual Duration in Genetic Programming. *IEEE Access*, **2020**, 8, 38692-38713	3.5	6
59	Simultaneous Type and Dimensional Synthesis of Planar 1DOF Mechanisms Using Evolutionary Search and Convertible Agents (DETC2009-86722). *Journal of Mechanisms and Robotics*, **2010**, 2,	2.2	6
58	SRDE **2009**,		6
57	A fast foreground object detection algorithm using Kernel Density Estimation **2012**,		6
56	Modeling effects of pesticides on populations of soil/litter invertebrates in an orchard ecosystem. *Environmental Toxicology and Chemistry*, **1982**, 1, 45-60	3.8	6
55	HEMO: A Sustainable Multi-objective Evolutionary Optimization Framework. *Lecture Notes in Computer Science*, **2003**, 1029-1040	0.9	6
54	A First-Order Difference Model-Based Evolutionary Dynamic Multiobjective Optimization. *Lecture Notes in Computer Science*, **2017**, 644-655	0.9	5
53	Optimizing an agent-based traffic evacuation model using genetic algorithms **2015**,		5
52	A hands-on paradigm for EAP education: undergraduates, pre-college students, and beyond **2007**,		5
51	A Learning-based Innovized Progress Operator for Faster Convergence in Evolutionary Multi-objective Optimization. *ACM Transactions on Evolutionary Learning*, **2022**, 2, 1-29		5

50	On-line EM Variants for Multivariate Normal Mixture Model in Background Learning and Moving Foreground Detection. *Journal of Mathematical Imaging and Vision*, **2014**, 48, 114-133	1.6	4
49	Evolutionary Design of Both Topologies and Parameters of a Hybrid Dynamical System. *IEEE Transactions on Evolutionary Computation*, **2012**, 16, 391-405	15.6	4
48	Non-even spread NSGA-II and its application to conflicting multi-objective compatible control **2009**,		4
47	SRaDE **2009**,		4
46	Breast Cancer Detection Using Haralick Features of Images Reconstructed from Ultra Wideband Microwave Scans. *Lecture Notes in Computer Science*, **2014**, 9-16	0.9	4
45	Hierarchical Topology-Based Cluster Representation for Scalable Evolutionary Multiobjective Clustering. *IEEE Transactions on Cybernetics*, **2021**, PP,	10.2	4
44	Evolving and Comparing Greenhouse Control Strategies using Model-Based Multi-Objective Optimization **2018**,		4
43	Dense and Switched Modular Primitives for Bond Graph Model Design. *Lecture Notes in Computer Science*, **2003**, 1764-1775	0.9	4
42	Control allocation-based adaptive control for greenhouse climate. *International Journal of Systems Science*, **2018**, 49, 1146-1163	2.3	3
41	Analysis and multi-objective optimization of a kind of teaching manipulator. *Swarm and Evolutionary Computation*, **2019**, 50, 100554	9.8	3
40	Evolutionary search and convertible agents for the simultaneous type and dimensional synthesis of planar mechanisms **2009**,		3
39	Meaningful representation and recombination of variable length genomes **2012**,		3
38	Evolutionary Robust Design of Analog Filters Using Genetic Programming. *Studies in Computational Intelligence*, **2007**, 479-496	0.8	3
37	Genetic Algorithm Optimized Feature Transformation □A Comparison with Different Classifiers. *Lecture Notes in Computer Science*, **2003**, 2121-2133	0.9	3
36	On the application of cohort-driven operators to continuous optimization problems using evolutionary computation. *Lecture Notes in Computer Science*, **1998**, 669-681	0.9	3
35	A model for azinphosmethyl attenuation and movement in a Michigan orchard ecosystem: I. Development and presentation of the experimental data base. *Archives of Environmental Contamination and Toxicology*, **1983**, 12, 99-110	3.2	3
34	Hybrid Surrogate-Based Constrained Optimization With a New Constraint-Handling Method. *IEEE Transactions on Cybernetics*, **2020**, PP,	10.2	3
33	Multi-layer hierarchical optimisation of greenhouse climate setpoints for energy conservation and improvement of crop yield. *Biosystems Engineering*, **2021**, 205, 212-233	4.8	3

32	Embedding a Repair Operator in Evolutionary Single and Multi-objective Algorithms - An Exploitation-Exploration Perspective. *Lecture Notes in Computer Science*, **2021**, 89-101	0.9	3
31	A differential prediction model for evolutionary dynamic multiobjective optimization **2018**,		3
30	A New Many-Objective Evolutionary Algorithm Based on Generalized Pareto Dominance. *IEEE Transactions on Cybernetics*, **2021**, PP,	10.2	3
29	Combining User Knowledge and Online Innovization for Faster Solution to Multi-objective Design Optimization Problems. *Lecture Notes in Computer Science*, **2021**, 102-114	0.9	3
28	A novel two-archive matching-based algorithm for multi- and many-objective optimization. *Information Sciences*, **2019**, 497, 106-128	7.7	2
27	Improving greenhouse environmental control using crop-model-driven multi-objective optimization **2018**,		2
26	Adaptive representation for flexible job-shop scheduling and rescheduling **2009**,		2
25	Evolved finite state controller for hybrid system **2009**,		2
24	Optimization for Variable-Size Problems Using Genetic Algorithms **2012**,		2
23	GPBG: A Framework for Evolutionary Design of Multi-domain Engineering Systems Using Genetic Programming and Bond Graphs. *Natural Computing Series*, **2008**, 319-345	2.5	2
22	Learning building block structure from crossover failure **2007**,		2
21	Introduction to genetic algorithms **2007**,		2
20	A model for azinphosmethyl attenuation and movement in a Michigan orchard ecosystem: II. Parameterization of a field-based model. *Archives of Environmental Contamination and Toxicology*, **1983**, 12, 111-119	3.2	2
19	The Effect of Weather on Bioenergetics of Breeding American Woodcock. *Journal of Wildlife Management*, **1983**, 47, 762	1.9	2
18	An Evolutionary Approach For Robust Layout Synthesis of MEMS. *Studies in Computational Intelligence*, **2007**, 519-542	0.8	2
17	A collaboration-based particle swarm optimizer for global optimization problems. *International Journal of Machine Learning and Cybernetics*, **2019**, 10, 1279-1300	3.8	2
16	A novel selection mechanism for evolutionary algorithms with metameric variable-length representations. *Soft Computing*, **2020**, 24, 16439-16452	3.5	1
15	Evolutionary design of discrete controllers for hybrid mechatronic systems. *International Journal of Systems Science*, **2015**, 46, 303-316	2.3	1

14	Solving multiobjective flexible job-shop scheduling using an adaptive representation **2010**,		1
13	A control optimization algorithm for greenhouse climate control problems **2010**,		1
12	Online background learning for illumination-robust foreground detection **2010**,		1
11	Robust engineering design of electronic circuits with active components using genetic programming and bond Graphs **2008**, 185-200		1
10	A Paradigm of Government/Industry/University Cooperation: A PSoC Controller for a NASA Robotic Arm **2007**,		1
9	AHP (Analytic Hierarchy Process) and Computer Analysis Software Used in Tourism Safety. *Journal of Software*, **2013**, 8,	3	1
8	Exploring Building Blocks through Crossover. *Lecture Notes in Computer Science*, **2008**, 707-714	0.9	1
7	Multi-Level Decomposition for Tractability in Structural Design Optimization. *Studies in Computational Intelligence*, **2008**, 41-62	0.8	1
6	Topological Synthesis of Robust Dynamic Systems by Sustainable Genetic Programming **2005**, 143-157		0
5	A two-phase framework of locating the reference point for decomposition-based constrained multi-objective evolutionary algorithms. *Knowledge-Based Systems*, **2022**, 239, 107933	7.3	0
4	Domain Specificity of Genetic Programming Based Automated Synthesis: A Case Study with Synthesis of Mechanical Vibration Absorbers **2006**, 275-290		
3	Automating the Hierarchical Synthesis of MEMS Using Evolutionary Approaches **2005**, 129-149		
2	A Statistical Model of GA Dynamics for the OneMax Problem. *Lecture Notes in Computer Science*, **2004**, 935-946	0.9	
1	The (M-1)+1 Framework of Relaxed Pareto Dominance for Evolutionary Many-Objective Optimization. *Lecture Notes in Computer Science*, **2021**, 349-361	0.9	