Michael Affenzeller

List of Publications by Year
in descending order

174 papers	1,667 citations	777949 13 h-index	651938 25 g-index
193 all docs	193 docs citations	193 times ranked	1294 citing authors

#	Article	IF	Citations
1	Integrated Machine Learning in Open-Ended Crane Scheduling: Learning Movement Speeds and Service Times. Procedia Computer Science, 2022, 200, 1031-1040.	1.2	2
2	Machine Learning based Data Stream Merging in Additive Manufacturing. Procedia Computer Science, 2022, 200, 1422-1431.	1.2	3
3	Improving the Quantum Multi-Swarm Optimization with Adaptive Differential Evolution for Dynamic Environments. Algorithms, 2022, 15, 154.	1.2	4
4	Continuous improvement and adaptation of predictive models in smart manufacturing and model management. IET Collaborative Intelligent Manufacturing, 2021, 3, 48-63.	1.9	5
5	Cheating Like The Neighbors: Logarithmic Complexity For Fitness Evaluation In Genetic Algorithms. , 2021, , .		1
6	Parameter identification for symbolic regression using nonlinear least squares. Genetic Programming and Evolvable Machines, 2020, 21, 471-501.	1.5	48
7	Smart Manufacturing and Continuous Improvement and Adaptation of Predictive Models. Procedia Manufacturing, 2020, 42, 528-531.	1.9	10
8	Models set pre-processing for genetic programming based evolvement of models of models. IOP Conference Series: Materials Science and Engineering, 2020, 734, 012108.	0.3	1
9	Performance, Quality, and Control in Steel Logistics 4.0. Procedia Manufacturing, 2020, 42, 429-433.	1.9	11
10	Symbolic Regression by Exhaustive Search: Reducing the Search Space Using Syntactical Constraints and Efficient Semantic Structure Deduplication. Genetic and Evolutionary Computation, 2020, , 79-99.	1.0	4
11	Concept Drift Detection with Variable Interaction Networks. Lecture Notes in Computer Science, 2020, , 296-303.	1.0	3
12	White Box vs. Black Box Modeling: On the Performance of Deep Learning, Random Forests, and Symbolic Regression in Solving Regression Problems. Lecture Notes in Computer Science, 2020, , 288-295.	1.0	1
13	â€œIncrementalâ€•Evaluation for Genetic Crossover. Lecture Notes in Computer Science, 2020, , 396-404.	1.0	1
14	Solution approaches for the dynamic stacking problem. , 2020, , .		4
15	Hash-Based Tree Similarity and Simplification in Genetic Programming for Symbolic Regression. Lecture Notes in Computer Science, 2020, , 361-369.	1.0	2
16	Solving a Flexible Resource-Constrained Project Scheduling Problem Under Consideration of Activity Priorities. Lecture Notes in Computer Science, 2020, , 327-334.	1.0	0
17	Genetic Programming Based Evolvement of Models of Models. Lecture Notes in Computer Science, 2020, , 387-395.	1.0	1
18	A Model-Based Learning Approach for Controlling the Energy Flows of a Residential Household Using Genetic Programming to Perform Symbolic Regression. Lecture Notes in Computer Science, 2020, , 405-412.	1.0	0

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19	Surrogate-Assisted Fitness Landscape Analysis for Computationally Expensive Optimization. Lecture Notes in Computer Science, 2020, , 247-254.	1.0	1
20	Uncertainty in real-world steel stacking problems. , 2019, , .		6
21	Online Diversity Control in Symbolic Regression via a Fast Hash-based Tree Similarity Measure. , 2019, , .		5
22	Mining Patterns from Genetic Improvement Experiments. , 2019, , .		0
23	Machine learning based concept drift detection for predictive maintenance. Computers and Industrial Engineering, 2019, 137, 106031.	3.4	97
24	Parsimony measures in multi-objective genetic programming for symbolic regression. , 2019, , .		7
25	Cluster Analysis of a Symbolic Regression Search Space. Genetic and Evolutionary Computation, 2019, , 85-102.	1.0	5
26	Modeling Sensor Networks for Predictive Maintenance. Lecture Notes in Computer Science, 2019, , 184-188.	1.0	2
27	Approximate Q-Learning for Stacking Problems with Continuous Production and Retrieval. Applied Artificial Intelligence, 2019, 33, 68-86.	2.0	3
28	Surrogate-assisted microscopic traffic simulation-based optimisation of routing parameters. International Journal of Simulation and Process Modelling, 2019, 14, 223.	0.1	2
29	Analysing a Hybrid Model-Based Evolutionary Algorithm for a Hard Grouping Problem. Lecture Notes in Computer Science, 2018, , 347-354.	1.0	0
30	Offspring Selection Genetic Algorithm Revisited: Improvements in Efficiency by Early Stopping Criteria in the Evaluation of Unsuccessful Individuals. Lecture Notes in Computer Science, 2018, , 424-431.	1.0	1
31	Optimization Networks for Integrated MachineÂLearning. Lecture Notes in Computer Science, 2018, , 392-399.	1.0	1
32	Optimization Approaches for the Physical Internet. Lecture Notes in Computer Science, 2018, , 236-245.	1.0	2
33	A General Solution Approach for the Location Routing Problem. Lecture Notes in Computer Science, 2018, , 257-265.	1.0	1
34	Analysis of Schema Frequencies in Genetic Programming. Lecture Notes in Computer Science, 2018, , 432-438.	1.0	2
35	A Fair Performance Comparison of Different Surrogate Optimization Strategies. Lecture Notes in Computer Science, 2018, , 408-415.	1.0	1
36	Using robust generalized fuzzy modeling and enhanced symbolic regression to model tribological systems. Applied Soft Computing Journal, 2018, 69, 610-624.	4.1	11

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37	Novel robustness measures for engineering design optimisation. International Journal of Simulation and Process Modelling, 2018, 13, 387.	0.1	1
38	Streaming Synthetic Time Series for Simulated Condition Monitoring. IFAC-PapersOnLine, 2018, 51, 643-648.	0.5	8
39	Schema-based diversification in genetic programming. , 2018, , .		1
40	Quasi-bistability of walk-based landscape measures in stochastic fitness landscapes. , 2018, , .		0
41	Algorithm selection on generalized quadratic assignment problem landscapes. , 2018, , .		6
42	Dynamic fitness functions for genetic improvement in compilers and interpreters. , 2018, , .		1
43	Solving a real world steel stacking problem. International Journal of Service and Computing Oriented Manufacturing, 2018, 3, 94.	0.2	7
44	Discrete real-world problems in a black-box optimization benchmark. , 2018, , .		2
45	Confidence-based ensemble modeling in medical data mining. , 2018, , .		1
46	Asynchronous surrogate-assisted optimization networks. , 2018, , .		0
47	Facilitating Evolutionary Algorithm Analysis with Persistent Data Structures. Lecture Notes in Computer Science, 2018, , 416-423.	1.0	2
48	Integrating Exploratory Landscape Analysis into Metaheuristic Algorithms. Lecture Notes in Computer Science, 2018, , 473-480.	1.0	0
49	Measures for the Evaluation and Comparison of Graphical Model Structures. Lecture Notes in Computer Science, 2018, , 283-290.	1.0	1
50	Dynamic observation of genotypic and phenotypic diversity for different symbolic regression GP variants. , 2017, , .		8
51	Instance-based algorithm selection on quadratic assignment problem landscapes. , 2017, , .		7
52	Enabling high-dimensional surrogate-assisted optimization by using sliding windows. , 2017, , .		2
53	Optimization networks for real-world production and logistics problems. , 2017, , .		2
54	Towards the design and implementation of optimization networks in HeuristicLab. , 2017, , .		6

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55	A Generalized 2D Output Model of Polymer Melt Flow in Single-Screw Extrusion. International Polymer Processing, 2017, 32, 209-216.	0.3	15
56	Extending Sim# for simulation-based optimisation of semi-automated machinery. International Journal of Simulation and Process Modelling, 2017, 12, 485.	0.1	1
57	Heterogeneous model ensembles for short-term prediction of stock market trends. International Journal of Simulation and Process Modelling, 2016, 11, 504.	0.1	2
58	Optimization Knowledge Center. , 2016, , .		2
59	Evolutionary Computation Software Systems (EvoSoft) Workshop 2016 Chairs' Welcome & Organization. , 2016, , .		0
60	Cyclic scheduling of a robotic cell. , 2016, , .		6
61	Evolutionary Procedural 2D Map Generation using Novelty Search. , 2016, , .		1
62	Distribution of waiting time for dynamic pickup and delivery problems. Annals of Operations Research, 2016, 236, 359-382.	2.6	15
63	Dynamic optimal power flow control with simulation-based evolutionary policy-function approximation. International Journal of Simulation and Process Modelling, 2015, 10, 294.	0.1	0
64	Simulation-Based Optimization withÂHeuristicLab: Practical Guidelines andÂReal-World Applications. , 2015, , 3-38.		9
65	Building Blocks Identification Based on Subtree Sample Counts for Genetic Programming. , 2015, , .		5
66	Diversity-Based Offspring Selection Criteria for Genetic Algorithms. Lecture Notes in Computer Science, 2015, , 393-400.	1.0	0
67	Data-based prediction of sentiments using heterogeneous model ensembles. Soft Computing, 2015, 19, 3401-3412.	2.1	23
68	Simplifying Problem Definitions in the HeuristicLab Optimization Environment. , 2015, , .		1
69	Metaheuristic Algorithms for the Quadratic Assignment Problem: Performance and Comparison. Topics in Intelligent Engineering and Informatics, 2015, , 171-190.	0.4	0
70	Robust Storage Assignment in Warehouses with Correlated Demand. Studies in Computational Intelligence, 2015, , 415-428.	0.7	7
71	Methods for Genealogy and Building Block Analysis in Genetic Programming. Studies in Computational Intelligence, 2015, , 61-74.	0.7	4
72	Multi-Population Genetic Programming with Data Migration for Symbolic Regression. Studies in Computational Intelligence, 2015, , 75-87.	0.7	3

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73	Sliding Window Symbolic Regression for Detecting Changes of System Dynamics. Genetic and Evolutionary Computation, 2015, , 91-107.	1.0	4
74	Complexity Measures for Multi-objective Symbolic Regression. Lecture Notes in Computer Science, 2015, , 409-416.	1.0	4
75	On the Effectiveness of Genetic Operations in Symbolic Regression. Lecture Notes in Computer Science, 2015, , 367-374.	1.0	1
76	Automatic Adaption of Operator Probabilities in Genetic Algorithms with Offspring Selection. Lecture Notes in Computer Science, 2015, , 433-438.	1.0	0
77	Dynamics of Predictability and Variable Influences Identified in Financial Data Using Sliding Window Machine Learning. Lecture Notes in Computer Science, 2015, , 326-333.	1.0	0
78	Optimizing Set-Up Times Using the HeuristicLab Optimization Environment. Lecture Notes in Computer Science, 2015, , 286-293.	1.0	0
79	Modeling a Lot-Aware Slab Stack Shuffling Problem. Lecture Notes in Computer Science, 2015, , 334-341.	1.0	0
80	Identification and Classification of Objects and Motions in Microscopy Images of Biological Samples Using Heuristic Algorithms. Studies in Computational Intelligence, 2015, , 103-117.	0.7	0
81	Data based prediction of cancer diagnoses using heterogeneous model ensembles. , 2014, , .		1
82	Genetic programming with data migration for symbolic regression. , 2014, , .		7
83	Identification of a nonlinear PMSM model using symbolic regression and its application to current optimization scenarios. , 2014, , .		21
84	Correlation of Problem Hardness and Fitness Landscapes in the Quadratic Assignment Problem. Topics in Intelligent Engineering and Informatics, 2014, , 165-195.	0.4	1
85	Affinity Based Slotting in Warehouses with Dynamic Order Patterns. Topics in Intelligent Engineering and Informatics, 2014, , 123-143.	0.4	6
86	Software-Enabled Investigation in Metaheuristic Power Grid Optimization. IEEE Transactions on Industrial Informatics, 2014, 10, 364-372.	7.2	4
87	Using FE Calculations and Data-Based System Identification Techniques to Model the Nonlinear Behavior of PMSMs. IEEE Transactions on Industrial Electronics, 2014, 61, 6454-6462.	5.2	46
88	Gaining Deeper Insights in Symbolic Regression. Genetic and Evolutionary Computation, 2014, , 175-190.	1.0	20
89	Enhancing local search algorithms for job shops with min-sum objectives by approximate move evaluation. Journal of Scheduling, 2013, 16, 495-518.	1.3	7
90	Evolutionary computation enabled controlled charging for e-mobility aggregators. , 2013, , .		3

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91	Simulation-based evolution of resupply and routing policies in rich vendor-managed inventory scenarios. Central European Journal of Operations Research, 2013, 21, 379-400.	1.1	13
92	Evolutionary identification of cancer predictors using clustered data. , 2013, , .		5
93	Effects of constant optimization by nonlinear least squares minimization in symbolic regression. , 2013, , .		48
94	Genetic programming enabled evolution of control policies for dynamic stochastic optimal power flow. , 2013, , .		2
95	Visualization of genetic lineages and inheritance information in genetic programming. , 2013, , .		21
96	Improving the Accuracy of Cancer Prediction by Ensemble Confidence Evaluation. Lecture Notes in Computer Science, 2013, , 316-323.	1.0	4
97	On the use of estimated tumour marker classifications in tumour diagnosis prediction - a case study for breast cancer. International Journal of Simulation and Process Modelling, 2013, 8, 29.	0.1	4
98	Application of an Island Model Genetic Algorithm for a Multi-track Music Segmentation Problem. Lecture Notes in Computer Science, 2013, , 13-24.	1.0	2
99	Automatic Algorithm Selection for the Quadratic Assignment Problem Using Fitness Landscape Analysis. Lecture Notes in Computer Science, 2013, , 109-120.	1.0	9
100	Nonlinear Least Squares Optimization of Constants in Symbolic Regression. Lecture Notes in Computer Science, 2013, , 420-427.	1.0	6
101	Probabilistic Electric Vehicle Charging Optimized With Genetic Algorithms and a Two-Stage Sampling Scheme. International Journal of Energy Optimization and Engineering, 2013, 2, 1-15.	0.4	7
102	Variable Interaction Networks in Medical Data. International Journal of Privacy and Health Information Management, 2013, 1, 1-16.	0.2	2
103	Evolutionary Algorithm Based Control Policies for Flexible Optimal Power Flow over Time. Lecture Notes in Computer Science, 2013, , 152-161.	1.0	2
104	An Integrated Clustering and Classification Approach for the Analysis of Tumor Patient Data. Lecture Notes in Computer Science, 2013, , 388-395.	1.0	1
105	Fitness Landscape Based Parameter Estimation for Robust Taboo Search. Lecture Notes in Computer Science, 2013, , 292-299.	1.0	2
106	On the architecture and implementation of tree-based genetic programming in HeuristicLab. , 2012, , .		21
107	Evolutionary optimization of multi-agent controlstrategies for electric vehicle charging. , 2012, , .		6
108	Generic hardness estimation using fitness and parameter landscapes applied to robust taboo search and the quadratic assignment problem. , 2012, , .		7

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109	Integration of flexible interfaces in optimization software frameworks for simulation-based optimization. , 2012, , .		7
110	Optimization knowledge base. , 2012, , .		4
111	An adaption of the schema theorem to various crossover and mutation operators for a music segmentation problem. , 2012, , .		2
112	Optimizing assembly line supply by integrating warehouse picking and forklift routing using simulation. , 2012, , .		7
113	Modelling and optimizing storage assignment in a steel slab yard. , 2012, , .		5
114	Application of Symbolic Regression on Blast Furnace and Temper Mill Datasets. Lecture Notes in Computer Science, 2012, , 400-407.	1.0	6
115	A Comprehensive Survey on Fitness Landscape Analysis. Studies in Computational Intelligence, 2012, , 161-191.	0.7	127
116	An exact approach for single machine subproblems in shifting bottleneck procedures for job shops with total weighted tardiness objective. European Journal of Operational Research, 2012, 218, 76-85.	3.5	12
117	Using Genetic Programming in Nonlinear Model Identification. Lecture Notes in Control and Information Sciences, 2012, , 89-109.	0.6	3
118	Analysis of Selected Evolutionary Algorithms in Feature Selection and Parameter Optimization for Data Based Tumor Marker Modeling. Lecture Notes in Computer Science, 2012, , 335-342.	1.0	6
119	Parameter Meta-optimization of Metaheuristic Optimization Algorithms. Lecture Notes in Computer Science, 2012, , 367-374.	1.0	21
120	Comprehensive and Automatic Fitness Landscape Analysis Using HeuristicLab. Lecture Notes in Computer Science, 2012, , 424-431.	1.0	7
121	Market Basket Analysis of Retail Data: Supervised Learning Approach. Lecture Notes in Computer Science, 2012, , 464-471.	1.0	5
122	Knowledge Discovery through Symbolic Regression with HeuristicLab. Lecture Notes in Computer Science, 2012, , 824-827.	1.0	5
123	Analysis of Allele Distribution Dynamics in Different Genetic Algorithms. Studies in Computational Intelligence, 2012, , 3-29.	0.7	0
124	Combination and Comparison of Different Genetic Encodings for the Vehicle Routing Problem. Lecture Notes in Computer Science, 2012, , 327-334.	1.0	1
125	Improving the Parsimony of Regression Models for an Enhanced Genetic Programming Process. Lecture Notes in Computer Science, 2012, , 264-271.	1.0	1
126	Heuristic Power Scheduling of Electric Vehicle Battery Charging Based on Discrete Event Simulation. Lecture Notes in Computer Science, 2012, , 311-318.	1.0	1

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127	Optimization of Parameter Settings for Genetic Algorithms in Music Segmentation. Lecture Notes in Computer Science, 2012, , 240-247.	1.0	2
128	Fitness Landscape Analysis of a Simulation Optimisation Problems with HeuristicLab. , 2011, , .		3
129	Production fine planning using a solution archive of priority rules. , 2011, , .		9
130	Re-warehousing vs. healing: Strategies for warehouse storage location assignment. , 2011, , .		18
131	Analysis of the effects of enhanced selection concepts for genetic programming based structure identification using fine-grained population diversity estimation. , 2011, , .		1
132	Overfitting detection and adaptive covariant parsimony pressure for symbolic regression. , 2011, , .		7
133	Simulation-based evolution of municipal glass-waste collection strategies utilizing electric trucks. , 2011, , .		10
134	Solving large-scale vehicle routing problem instances using an island-model offspring selection genetic algorithm. , 2011, , .		7
135	A new metric to measure distances between solutions to the Quadratic Assignment Problem. , 2011, , .		3
136	Lower bounds for single machine subproblems occurring in weighted tardiness oriented shifting bottleneck procedures. , 2011, , .		2
137	Computational study of neighborhood operator performance on the Traveling Salesman Problem with Time Windows in neighborhood search based frameworks (RTS, VNS). , 2011, , .		2
138	Identification of cancer diagnosis estimation models using evolutionary algorithms. , 2011, , .		24
139	Effective allele preservation by offspring selection: an empirical study for the TSP. International Journal of Simulation and Process Modelling, 2010, 6, 29.	0.1	3
140	Classification of tumor marker values using heuristic data mining methods. , 2010, , .		11
141	Analysis of the dynamics of allele distribution for some selected GA-variants. , 2010, , .		1
142	A closer look down the basins of attraction. , 2010, , .		10
143	Metaheuristic Optimization. , 2010, , 103-155.		0
144	Overview: A Simulation Based Metaheuristic Optimization Approach to Optimal Power Dispatch Related to a Smart Electric Grid. Lecture Notes in Computer Science, 2010, , 368-378.	1.0	4

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145	Music Segmentation With Genetic Algorithms. , 2009, , .		3
146	Coupling simulation with HeuristicLab to solve facility layout problems. , 2009, , .		4
147	Fine grained population diversity analysis for parallel genetic programming. , 2009, , .		0
148	Priority Rule Generation with a Genetic Algorithm to Minimize Sequence Dependent Setup Costs. Lecture Notes in Computer Science, 2009, , 817-824.	1.0	12
149	About the dynamics of essential genetic information. , 2009, , .		1
150	Using enhanced genetic programming techniques for evolving classifiers in the context of medical diagnosis. Genetic Programming and Evolvable Machines, 2009, 10, 111-140.	1.5	26
151	Agent-Based Simulation of Dispatching Rules in Dynamic Pickup and Delivery Problems. , 2009, , .		6
152	Evaluation of Dispatching Strategies for the Optimization of a Real-World Production Plant. , 2009, , .		2
153	A Computational Study of Lower Bounding Schemes for Total Weighted Tardiness Job Shops. , 2009, , .		2
154	Application of Genetic Programming on Temper Mill Datasets. , 2009, , .		3
155	System Identification of Blast Furnace Processes with Genetic Programming. , 2009, , .		1
156	Virtual Sensors for Emissions of a Diesel Engine Produced by Evolutionary System Identification. Lecture Notes in Computer Science, 2009, , 657-664.	1.0	4
157	Model Driven Rapid Prototyping of Heuristic Optimization Algorithms. Lecture Notes in Computer Science, 2009, , 729-736.	1.0	6
158	Heuristic Methods for Searching and Clustering Hierarchical Workflows. Lecture Notes in Computer Science, 2009, , 737-744.	1.0	4
159	On Structural Identification of 2D Regression Functions for Indoor Bluetooth Localization. Lecture Notes in Computer Science, 2009, , 801-808.	1.0	0
160	On Crossover Success Rate in Genetic Programming with Offspring Selection. Lecture Notes in Computer Science, 2009, , 232-243.	1.0	2
161	Using Heuristic Optimization for Segmentation of Symbolic Music. Lecture Notes in Computer Science, 2009, , 641-648.	1.0	4
162	On the Success Rate of Crossover Operators for Genetic Programming with Offspring Selection. Lecture Notes in Computer Science, 2009, , 793-800.	1.0	1

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163	Online modelling based on Genetic Programming. International Journal of Intelligent Systems Technologies and Applications, 2007, 2, 255.	0.2	11
164	Advanced Genetic Programming Based Machine Learning. Mathematical Modelling and Algorithms, 2007, 6, 455-480.	0.5	28
165	Self-adaptive Population Size Adjustment for Genetic Algorithms. , 2007, , 820-828.		17
166	Benefits of Plugin-Based Heuristic Optimization Software Systems. , 2007, , 747-754.		18
167	Selection Pressure Driven Sliding Window Behavior in Genetic Programming Based Structure Identification. , 2007, , 788-795.		4
168	NOx Virtual Sensor Based on Structure Identification and Global Optimization. , 2005, , .		23
169	Goal-oriented preservation of essential genetic information by offspring selection. , 2005, , .		12
170	GA-Selection Revisited from an ES-Driven Point of View. Lecture Notes in Computer Science, 2005, , 262-271.	1.0	4
171	SASEGASA: A New Generic Parallel Evolutionary Algorithm for Achieving Highest Quality Results. Journal of Heuristics, 2004, 10, 243-267.	1.1	32
172	SASEGASA: An Evolutionary Algorithm for Retarding Premature Convergence by Self-Adaptive Selection Pressure Steering. Lecture Notes in Computer Science, 2003, , 438-445.	1.0	7
173	A Self-adaptive Model for Selective Pressure Handling within the Theory of Genetic Algorithms. Lecture Notes in Computer Science, 2003, , 384-393.	1.0	16
174	A New Approach to Evolutionary Computation: Segregative Genetic Algorithms (SEGA). Lecture Notes in Computer Science, 2001, , 594-601.	1.0	7