Mauro Castelli

List of Publications by Year in Descending Order

141 papers	1,802 citations	20 h-index	39 g-index
156 ext. papers	2,304 ext. citations	3.7 avg, IF	5.51 L-index

#	Paper	IF	Citations
141	Machine learning for liquidity risk modelling: A supervisory perspective. *Economic Analysis and Policy*, **2022**,	3.8	1
140	A novel binary classification approach based on geometric semantic genetic programming. *Swarm and Evolutionary Computation*, **2022**, 69, 101028	9.8	0
139	Salp Swarm Optimization: A critical review. *Expert Systems With Applications*, **2022**, 189, 116029	7.8	6
138	Approaching European Supervisory Risk Assessment with SupTech: A Proposal of an Early Warning System. *Risks*, **2022**, 10, 71	1.6	0
137	Combining Geometric Semantic GP with Gradient-Descent Optimization. *Lecture Notes in Computer Science*, **2022**, 19-33	0.9	1
136	A Weight and Meta-Analysis on the Academic Achievement of High School Students. *Education Sciences*, **2022**, 12, 287	2.2	
135	The Effect of Multi-Generational Selection in Geometric Semantic Genetic Programming. *Applied Sciences (Switzerland)*, **2022**, 12, 4836	2.6	
134	GSGP-CUDA A CUDA framework for Geometric Semantic Genetic Programming. *SoftwareX*, **2022**, 18, 101085	2.7	0
133	Generative adversarial networks for generating synthetic features for Wi-Fi signal quality. *PLoS ONE*, **2021**, 16, e0260308	3.7	
132	Object detection for automatic cancer cell counting in zebrafish xenografts. *PLoS ONE*, **2021**, 16, e0260609	3.7	2
131	Structural similarity index (SSIM) revisited: A data-driven approach. *Expert Systems With Applications* , **2021**, 189, 116087	7.8	3
130	Impact of GAN-based lesion-focused medical image super-resolution on the robustness of radiomic features. *Scientific Reports*, **2021**, 11, 21361	4.9	4
129	Time Series Clustering of Online Gambling Activities for Addicted Users Detection. *Applied Sciences (Switzerland)*, **2021**, 11, 2397	2.6	1
128	General Purpose Optimization Library (GPOL): A Flexible and Efficient Multi-Purpose Optimization Library in Python. *Applied Sciences (Switzerland)*, **2021**, 11, 4774	2.6	1
127	Comparing Stacking Ensemble Techniques to Improve Musculoskeletal Fracture Image Classification. *Journal of Imaging*, **2021**, 7, 100	3.1	2
126	Combinatorial Optimization Problems and Metaheuristics: Review, Challenges, Design, and Development. *Applied Sciences (Switzerland)*, **2021**, 11, 6449	2.6	4
125	Improving convolutional neural networks performance for image classification using test time augmentation: a case study using MURA dataset. *Health Information Science and Systems*, **2021**, 9, 33	5.1	3

124	Machine Learning Applied to Banking Supervision a Literature Review. *Risks*, **2021**, 9, 136	1.6	3
123	A machine learning approximation of the 2015 Portuguese high school student grades: A hybrid approach. *Education and Information Technologies*, **2021**, 26, 1527-1547	3.6	9
122	Genetic programming for stacked generalization. *Swarm and Evolutionary Computation*, **2021**, 65, 100913	9.8	1
121	Soft target and functional complexity reduction: A hybrid regularization method for genetic programming. *Expert Systems With Applications*, **2021**, 177, 114929	7.8	2
120	Algorithmic Music for Therapy: Effectiveness and Perspectives. *Applied Sciences (Switzerland)*, **2021**, 11, 8833	2.6	1
119	Competitive intelligence: A unified view and modular definition. *Technological Forecasting and Social Change*, **2021**, 173, 121086	9.5	3
118	Remote Estimation of Target Height from Unmanned Aerial Vehicle (UAV) Images. *Remote Sensing*, **2020**, 12, 3602	5	1
117	Forecasting Electricity Prices: A Machine Learning Approach. *Algorithms*, **2020**, 13, 119	1.8	2
116	How Deeply to Fine-Tune a Convolutional Neural Network: A Case Study Using a Histopathology Dataset. *Applied Sciences (Switzerland)*, **2020**, 10, 3359	2.6	19
115	Specializing Context-Free Grammars With a (1 + 1)-EA. *IEEE Transactions on Evolutionary Computation*, **2020**, 24, 960-973	15.6	3
114	Using artificial intelligence methods to assess academic achievement in public high schools of a European Union country. *Heliyon*, **2020**, 6, e04081	3.6	14
113	A Hybrid End-to-End Approach Integrating Conditional Random Fields into CNNs for Prostate Cancer Detection on MRI. *Applied Sciences (Switzerland)*, **2020**, 10, 338	2.6	8
112	Predicting Days on Market to Optimize Real Estate Sales Strategy. *Complexity*, **2020**, 2020, 1-22	1.6	0
111	A Novel Architecture to Classify Histopathology Images Using Convolutional Neural Networks. *Applied Sciences (Switzerland)*, **2020**, 10, 2929	2.6	4
110	Explorations of the Semantic Learning Machine Neuroevolution Algorithm: Dynamic Training Data Use, Ensemble Construction Methods, and Deep Learning Perspectives. *Genetic and Evolutionary Computation*, **2020**, 39-62	0.8	
109	Is k Nearest Neighbours Regression Better Than GP?. *Lecture Notes in Computer Science*, **2020**, 244-261	0.9	
108	Machine learning techniques to predict the effectiveness of music therapy: A randomized controlled trial. *Computer Methods and Programs in Biomedicine*, **2020**, 185, 105160	6.9	5
107	A Parallel Particle Swarm Optimisation for Selecting Optimal Virtual Machine on Cloud Environment. *Applied Sciences (Switzerland)*, **2020**, 10, 6538	2.6	1

106	Comparative Study of First Order Optimizers for Image Classification Using Convolutional Neural Networks on Histopathology Images. *Journal of Imaging*, **2020**, 6,	3.1	24
105	A Machine Learning Approach to Predict Air Quality in California. *Complexity*, **2020**, 2020, 1-23	1.6	20
104	Musculoskeletal Images Classification for Detection of Fractures Using Transfer Learning. *Journal of Imaging*, **2020**, 6,	3.1	7
103	Weighted Hierarchical Grammatical Evolution. *IEEE Transactions on Cybernetics*, **2020**, 50, 476-488	10.2	4
102	Genetic programming in the twenty-first century: a bibliometric and content-based analysis from both sides of the fence. *Genetic Programming and Evolvable Machines*, **2020**, 21, 181-204	2	5
101	Transfer Learning with Convolutional Neural Networks for Diabetic Retinopathy Image Classification. A Review. *Applied Sciences (Switzerland)*, **2020**, 10, 2021	2.6	32
100	Using artificial intelligence to overcome over-indebtedness and fight poverty. *Journal of Business Research*, **2020**, 131, 411-411	8.7	4
99	Semantic learning machine improves the CNN-Based detection of prostate cancer in non-contrast-enhanced MRI **2019**,		3
98	Enhancing classification performance of convolutional neural networks for prostate cancer detection on magnetic resonance images **2019**,		1
97	GSGP-C++ 2.0: A geometric semantic genetic programming framework. *SoftwareX*, **2019**, 10, 100313	2.7	4
96	Analysis of the proficiency of fully connected neural networks in the process of classifying digital images. Benchmark of different classification algorithms on high-level image features from convolutional layers. *Expert Systems With Applications*, **2019**, 135, 12-38	7.8	11
95	Comparing Deep and Machine Learning Approaches in Bioinformatics: A miRNA-Target Prediction Case Study. *Lecture Notes in Computer Science*, **2019**, 31-44	0.9	1
94	Genetic programming with semantic equivalence classes. *Swarm and Evolutionary Computation*, **2019**, 44, 453-469	9.8	7
93	. *IEEE Transactions on Evolutionary Computation*, **2019**, 23, 156-169	15.6	6
92	A distance between populations for n-points crossover in genetic algorithms. *Swarm and Evolutionary Computation*, **2019**, 44, 636-645	9.8	2
91	Comparing incomplete sequences via longest common subsequence. *Theoretical Computer Science*, **2019**, 796, 272-285	1.1	2
90	Extending Local Search in Geometric Semantic Genetic Programming. *Lecture Notes in Computer Science*, **2019**, 775-787	0.9	1
89	Top k 2-Clubs in a Network: A Genetic Algorithm. *Lecture Notes in Computer Science*, **2019**, 656-663	0.9	

88	Supporting Medical Decisions for Treating Rare Diseases Through Genetic Programming. *Lecture Notes in Computer Science*, **2019**, 187-203	0.9	4
87	Computational Intelligence for Life Sciences. *Fundamenta Informaticae*, **2019**, 171, 57-80	1	2
86	Evolving multidimensional transformations for symbolic regression with M3GP. *Memetic Computing* , **2019**, 11, 111-126	3.4	15
85	Alignment-based genetic programming for real life applications. *Swarm and Evolutionary Computation*, **2019**, 44, 840-851	9.8	6
84	Forecasting performance of regional innovation systems using semantic-based genetic programming with local search optimizer. *Computers and Operations Research*, **2019**, 106, 179-190	4.6	10
83	A Parallel Multiobjective Metaheuristic for Multiple Sequence Alignment. *Journal of Computational Biology*, **2018**, 25, 1009-1022	1.7	2
82	An artificial intelligence system for predicting customer default in e-commerce. *Expert Systems With Applications*, **2018**, 104, 1-21	7.8	41
81	The impact of big data analytics on firms high value business performance. *Information Systems Frontiers*, **2018**, 20, 209-222	4	111
80	A Characteristic-Based Framework for Multiple Sequence Aligners. *IEEE Transactions on Cybernetics*, **2018**, 48, 41-51	10.2	9
79	Multiobjective characteristic-based framework for very-large multiple sequence alignment. *Applied Soft Computing Journal*, **2018**, 69, 719-736	7.5	0
78	Unveiling evolutionary algorithm representation with DU maps. *Genetic Programming and Evolvable Machines*, **2018**, 19, 351-389	2	5
77	A Multiple Expression Alignment Framework for Genetic Programming. *Lecture Notes in Computer Science*, **2018**, 166-183	0.9	
76	Improving eQTL Analysis Using a Machine Learning Approach for Data Integration: A Logistic Model Tree Solution. *Journal of Computational Biology*, **2018**, 25, 1091-1105	1.7	2
75	Neuroevolution under unimodal error landscapes **2018**,		4
74	Pruning Techniques for Mixed Ensembles of Genetic Programming Models. *Lecture Notes in Computer Science*, **2018**, 52-67	0.9	4
73	A Scalable Genetic Programming Approach to Integrate miRNA-Target Predictions: Comparing Different Parallel Implementations of M3GP. *Complexity*, **2018**, 2018, 1-13	1.6	1
72	Accurate High Performance Concrete Prediction with an Alignment-Based Genetic Programming System. *International Journal of Concrete Structures and Materials*, **2018**, 12,	2.8	3
71	Local Search is Underused in Genetic Programming. *Genetic and Evolutionary Computation*, **2018**, 119-137	0.8	10

70	Learning the Structure of Bayesian Networks: A Quantitative Assessment of the Effect of Different Algorithmic Schemes. *Complexity*, **2018**, 2018, 1-12	1.6	12
69	EDDA-V2 An Improvement of the Evolutionary Demes Despeciation Algorithm. *Lecture Notes in Computer Science*, **2018**, 185-196	0.9	2
68	Swarm intelligence for optimizing the parameters of multiple sequence aligners. *Swarm and Evolutionary Computation*, **2018**, 42, 16-28	9.8	4
67	Predicting per capita violent crimes in urban areas: an artificial intelligence approach. *Journal of Ambient Intelligence and Humanized Computing*, **2017**, 8, 29-36	3.7	13
66	Multi-objective genetic algorithm with variable neighbourhood search for the electoral redistricting problem. *Swarm and Evolutionary Computation*, **2017**, 36, 37-51	9.8	20
65	An expert system for extracting knowledge from customers reviews: The case of Amazon.com, Inc.. *Expert Systems With Applications*, **2017**, 84, 117-126	7.8	15
64	PSXO **2017**,		2
63	Prediction of ships' position by analysing AIS data: an artificial intelligence approach. *International Journal of Web Engineering and Technology*, **2017**, 12, 253	0.3	1
62	Using biological knowledge for multiple sequence aligner decision making. *Information Sciences*, **2017**, 420, 278-298	7.7	1
61	Reducing Alignment Time Complexity of Ultra-Large Sets of Sequences. *Journal of Computational Biology*, **2017**, 24, 1144-1154	1.7	0
60	Geometric semantic genetic programming for biomedical applications: A state of the art upgrade **2017**,		1
59	An initialization technique for geometric semantic GP based on demes evolution and despeciation **2017**,		6
58	An evolutionary system for ozone concentration forecasting. *Information Systems Frontiers*, **2017**, 19, 1123-1132	4	6
57	The influence of population size in geometric semantic GP. *Swarm and Evolutionary Computation*, **2017**, 32, 110-120	9.8	5
56	Automatic modeling of a gas turbine using genetic programming: An experimental study. *Applied Soft Computing Journal*, **2017**, 50, 212-222	7.5	19
55	Unsure when to stop? **2017**,		5
54	Stock index return forecasting: semantics-based genetic programming with local search optimiser. *International Journal of Bio-Inspired Computation*, **2017**, 10, 159	2.9	1
53	Prediction of relative position of CT slices using a computational intelligence system. *Applied Soft Computing Journal*, **2016**, 46, 537-542	7.5	8

52	Self-tuning geometric semantic Genetic Programming. *Genetic Programming and Evolvable Machines*, **2016**, 17, 55-74	2	12
51	Semantic genetic programming for fast and accurate data knowledge discovery. *Swarm and Evolutionary Computation*, **2016**, 26, 1-7	9.8	13
50	Multiclass Classification Through Multidimensional Clustering. *Genetic and Evolutionary Computation*, **2016**, 219-239	0.8	5
49	An Analysis of Geometric Semantic Crossover: A Computational Geometry Approach **2016**,		3
48	An Artificial Intelligence System to Predict Quality of Service in Banking Organizations. *Computational Intelligence and Neuroscience*, **2016**, 2016, 9139380	3	3
47	Controlling Individuals Growth in Semantic Genetic Programming through Elitist Replacement. *Computational Intelligence and Neuroscience*, **2016**, 2016, 8326760	3	2
46	A Comparison Between Representations for Evolving Images. *Lecture Notes in Computer Science*, **2016**, 163-185	0.9	2
45	An evolutionary system for exploitation of fractured geothermal reservoirs. *Computational Geosciences*, **2016**, 20, 385-396	2.7	2
44	A Machine Learning Approach for the Integration of miRNA-Target Predictions **2016**,		1
43	Parameter evaluation of geometric semantic genetic programming in pharmacokinetics. *International Journal of Bio-Inspired Computation*, **2016**, 8, 42	2.9	10
42	Parameterized tractability of the maximum-duo preservation string mapping problem. *Theoretical Computer Science*, **2016**, 646, 16-25	1.1	5
41	Arbitrarily Close Alignments in the Error Space **2016**,		5
40	Geometric Semantic Genetic Programming with Local Search **2015**,		21
39	Correcting gene tree by removal and modification: Tractability and approximability. *Journal of Discrete Algorithms*, **2015**, 33, 115-129		
38	How to Exploit Alignment in the Error Space: Two Different GP Models. *Genetic and Evolutionary Computation*, **2015**, 133-148	0.8	4
37	Forecasting short-term electricity consumption using a semantics-based genetic programming framework: The South Italy case. *Energy Economics*, **2015**, 47, 37-41	8.3	26
36	A C++ framework for geometric semantic genetic programming. *Genetic Programming and Evolvable Machines*, **2015**, 16, 73-81	2	65
35	Energy Consumption Forecasting Using Semantic-Based Genetic Programming with Local Search Optimizer. *Computational Intelligence and Neuroscience*, **2015**, 2015, 971908	3	12

34	Predicting Burned Areas of Forest Fires: an Artificial Intelligence Approach. *Fire Ecology*, **2015**, 11, 106-118	3.1	39
33	Prediction of energy performance of residential buildings: A genetic programming approach. *Energy and Buildings*, **2015**, 102, 67-74	7	75
32	Improving Maritime Awareness with Semantic Genetic Programming and Linear Scaling: Prediction of Vessels Position Based on AIS Data. *Lecture Notes in Computer Science*, **2015**, 732-744	0.9	3
31	A geometric semantic genetic programming system for the electoral redistricting problem. *Neurocomputing*, **2015**, 154, 200-207	5.4	8
30	Electricity Demand Modelling with Genetic Programming. *Lecture Notes in Computer Science*, **2015**, 213-225	2.9	
29	A survey of semantic methods in genetic programming. *Genetic Programming and Evolvable Machines*, **2014**, 15, 195-214	2	107
28	Corrections to "Semantic Search Based Genetic Programming and the Effect of Introns Deletion" [Jan 14 103-113]. *IEEE Transactions on Cybernetics*, **2014**, 44, 565-565	10.2	
27	Prediction of the Unified Parkinson's Disease Rating Scale assessment using a genetic programming system with geometric semantic genetic operators. *Expert Systems With Applications*, **2014**, 41, 4608-4616	7.8	42
26	Genetic algorithm with variable neighborhood search for the optimal allocation of goods in shop shelves. *Operations Research Letters*, **2014**, 42, 355-360	1	23
25	Geometric Selective Harmony Search. *Information Sciences*, **2014**, 279, 468-482	7.7	32
24	Semantic Search-Based Genetic Programming and the Effect of Intron Deletion. *IEEE Transactions on Cybernetics*, **2014**, 44, 103-13	10.2	41
23	Geometric Semantic Genetic Programming for Real Life Applications. *Genetic and Evolutionary Computation*, **2014**, 191-209	0.8	36
22	ESAGP – A Semantic GP Framework Based on Alignment in the Error Space. *Lecture Notes in Computer Science*, **2014**, 150-161	0.9	10
21	A Multi-dimensional Genetic Programming Approach for Multi-class Classification Problems. *Lecture Notes in Computer Science*, **2014**, 48-60	0.9	16
20	A new genetic programming framework based on reaction systems. *Genetic Programming and Evolvable Machines*, **2013**, 14, 457-471	2	
19	A hybrid genetic algorithm for the repetition free longest common subsequence problem. *Operations Research Letters*, **2013**, 41, 644-649	1	10
18	Better GP benchmarks: community survey results and proposals. *Genetic Programming and Evolvable Machines*, **2013**, 14, 3-29	2	144
17	Prediction of high performance concrete strength using Genetic Programming with geometric semantic genetic operators. *Expert Systems With Applications*, **2013**, 40, 6856-6862	7.8	77

16	An efficient implementation of geometric semantic genetic programming for anticoagulation level prediction in pharmacogenetics **2013**,		2
15	Land Cover/Land Use Multiclass Classification Using GP with Geometric Semantic Operators. *Lecture Notes in Computer Science*, **2013**, 334-343	0.9	6
14	Prediction of Forest Aboveground Biomass: An Exercise on Avoiding Overfitting. *Lecture Notes in Computer Science*, **2013**, 407-417	0.9	6
13	A New Implementation of Geometric Semantic GP and Its Application to Problems in Pharmacokinetics. *Lecture Notes in Computer Science*, **2013**, 205-216	0.9	64
12	An Efficient Implementation of Geometric Semantic Genetic Programming for Anticoagulation Level Prediction in Pharmacogenetics. *Lecture Notes in Computer Science*, **2013**, 78-89	0.9	11
11	Genetic programming needs better benchmarks **2012**,		145
10	Parameter tuning of evolutionary reactions systems **2012**,		4
9	Evolutionary Reaction Systems. *Lecture Notes in Computer Science*, **2012**, 13-25	0.9	3
8	The K landscapes **2011**,		15
7	The effect of selection from old populations in genetic algorithms **2011**,		1
6	A Quantitative Study of Learning and Generalization in Genetic Programming. *Lecture Notes in Computer Science*, **2011**, 25-36	0.9	14
5	A Method to Reuse Old Populations in Genetic Algorithms. *Lecture Notes in Computer Science*, **2011**, 138-152	0.9	1
4	Multi Objective Genetic Programming for Feature Construction in Classification Problems. *Lecture Notes in Computer Science*, **2011**, 503-506	0.9	
3	Measuring bloat, overfitting and functional complexity in genetic programming **2010**,		68
2	A comparison of the generalization ability of different genetic programming frameworks **2010**,		11
1	Classification of Oncologic Data with Genetic Programming. *Journal of Artificial Evolution and Applications*, **2009**, 2009, 1-13		3