Michael N Vrahatis

List of Publications by Year
in descending order

68 papers	3,590 citations	304743 22 h-index	138484 58 g-index
73 all docs	73 docs citations	73 times ranked	2587 citing authors

#	Article	IF	Citations
1	Rotation forest of random subspace models. Intelligent Decision Technologies, 2022, , 1-10.	0.9	0
2	Computational insights on the molecular mechanisms across breast cancer progression combining gene differential expression and co-expression. , 2021, , .		0
3	Dynamic search trajectory methods for global optimization. Annals of Mathematics and Artificial Intelligence, 2020, 88, 3-37.	1.3	2
4	Intermediate value theorem for simplices for simplicial approximation of fixed points and zeros. Topology and Its Applications, 2020, 275, 107036.	0.4	4
5	Particle Swarm Optimization for Computing Nash and Stackelberg Equilibria in Energy Markets. SN Operations Research Forum, 2020, 1, 1.	1.0	1
6	Generalizations of the Intermediate Value Theorem for Approximating Fixed Points and Zeros of Continuous Functions. Lecture Notes in Computer Science, 2020, , 223-238.	1.3	1
7	Evaluation of PNN pattern-layer activation function approximations in different training setups. International Journal of Speech Technology, 2019, 22, 1039-1049.	2.2	4
8	No Free Lunch Theorem: A Review. Springer Optimization and Its Applications, 2019, , 57-82.	0.9	154
9	Evaluating generalization through interval-based neural network inversion. Neural Computing and Applications, 2019, 31, 9241-9260.	5.6	3
10	Data preprocessing in predictive data mining. Knowledge Engineering Review, 2019, 34, .	2.6	80
11	Content driven clustering algorithm combining density and distance functions. Pattern Recognition, 2019, 87, 190-202.	8.1	6
12	Hybrid local boosting utilizing unlabeled data in classification tasks. Evolving Systems, 2019, 10, 51-61.	3.9	3
13	Algorithm 987. ACM Transactions on Mathematical Software, 2018, 44, 1-7.	2.9	2
14	Interactive music composition driven by feature evolution. SpringerPlus, 2016, 5, 826.	1.2	15
15	Preface [Special issue: NumAn 2014]. Applied Numerical Mathematics, 2016, 104, 99-102.	2.1	0
16	Generalization of the Bolzano theorem for simplices. Topology and Its Applications, 2016, 202, 40-46.	0.4	9
17	Integrating global and local boosting. , 2015, , .		1
18	A chemical energy approach of avascular tumor growth: multiscale modeling and qualitative results. SpringerPlus, 2015, 4, 660.	1.2	3

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19	Performance evaluation of clustering algorithms on microcalcifications as mammography findings. , 2013, , .		0
20	CHAOS AND MUSIC: FROM TIME SERIES ANALYSIS TO EVOLUTIONARY COMPOSITION. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2013, 23, 1350181.	1.7	3
21	Intelligent Music Composition. , 2013, , 239-256.		1
22	Intelligent Generation of Rhythmic Sequences Using Finite L-systems. , 2012, , .		6
23	Intelligent Real-Time Music Accompaniment for Constraint-Free Improvisation. , 2012, , .		3
24	Controlling interactive evolution of 8-bit melodies with genetic programming. Soft Computing, 2012, 16, 1997-2008.	3.6	5
25	Multimodal optimization using niching differential evolution with index-based neighborhoods. , 2012, , .		12
26	Interactive Evolution of 8â€"Bit Melodies with Genetic Programming towards Finding Aesthetic Measures for Sound. Lecture Notes in Computer Science, 2012, , 141-152.	1.3	9
27	Finding multiple global optima exploiting differential evolution's niching capability. , 2011, , .		43
28	Enhancing Differential Evolution Utilizing Proximity-Based Mutation Operators. IEEE Transactions on Evolutionary Computation, 2011, 15, 99-119.	10.0	391
29	Hardware-friendly Higher-Order Neural Network Training using Distributed Evolutionary Algorithms. Applied Soft Computing Journal, 2010, 10, 398-408.	7.2	34
30	Novel orbit based symmetric cryptosystems. Mathematical and Computer Modelling, 2010, 51, 239-246.	2.0	5
31	Evolving cognitive and social experience in Particle Swarm Optimization through Differential Evolution. , 2010, , .		18
32	Musical Composer Identification through Probabilistic and Feedforward Neural Networks. Lecture Notes in Computer Science, 2010, , 411-420.	1.3	12
33	Improving fuzzy cognitive maps learning through memetic particle swarm optimization. Soft Computing, 2009, 13, 77-94.	3.6	35
34	Detecting resonances in conservative maps using evolutionary algorithms. Physics Letters, Section A: General, Atomic and Solid State Physics, 2009, 373, 334-341.	2.1	24
35	Aitken and Neville inverse interpolation methods for the Lucas logarithm problem. Applied Mathematics and Computation, 2009, 209, 52-56.	2.2	2
36	Expeditive Extensions of Evolutionary Bayesian Probabilistic Neural Networks. Lecture Notes in Computer Science, 2009, , 30-44.	1.3	1

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37	Novel Approaches to Probabilistic Neural Networks Through Bagging and Evolutionary Estimating of Prior Probabilities. Neural Processing Letters, 2008, 27, 153-162.	3.2	31
38	Existence and computation of short-run equilibria in economic geography. Applied Mathematics and Computation, 2007, 184, 93-103.	2.2	11
39	Generalizing the <mml:math altimg="si2.gif" display="inline" overflow="scroll" xmlns:xocs="http://www.elsevier.com/xml/xocs/dtd" xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.elsevier.com/xml/ja/dtd" xmlns:ja="http://www.elsevier.com/xml/ja/dtd" xmlns:mml="http://www.w3.org/1998/Math/MathML" xmlns:tb="http://www.elsevier.com/xml/common/table/dtd" xmlns:sb="http://www.elsevier.com/xml/common/struct-bib/dtd" xmlns:ce="http://www.elsevier.co...	2.0	8
40	Generalized locally recurrent probabilistic neural networks with application to text-independent speaker verification. Neurocomputing, 2007, 70, 1424-1438.	5.9	24
41	Memetic particle swarm optimization. Annals of Operations Research, 2007, 156, 99-127.	4.1	136
42	Determining the number of real roots of polynomials through neural networks. Computers and Mathematics With Applications, 2006, 51, 527-536.	2.7	9
43	Estimating the number of clusters using a windowing technique. Pattern Recognition and Image Analysis, 2006, 16, 143-154.	1.0	10
44	Cell-nuclear data reduction and prognostic model selection in bladder tumor recurrence. Artificial Intelligence in Medicine, 2006, 38, 291-303.	6.5	4
45	ADAPTIVE ALGORITHMS FOR NEURAL NETWORK SUPERVISED LEARNING: A DETERMINISTIC OPTIMIZATION APPROACH. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2006, 16, 1929-1950.	1.7	17
46	Privacy preserving electronic data gathering. Mathematical and Computer Modelling, 2005, 42, 739-746.	2.0	2
47	New globally convergent training scheme based on the resilient propagation algorithm. Neurocomputing, 2005, 64, 253-270.	5.9	122
48	Aitken and Neville Inverse Interpolation Methods over Finite Fields. Applied Numerical Analysis and Computational Mathematics, 2005, 2, 100-107.	0.6	5
49	Unsupervised clustering on dynamic databases. Pattern Recognition Letters, 2005, 26, 2116-2127.	4.2	24
50	Fuzzy Cognitive Maps Learning Using Particle Swarm Optimization. Journal of Intelligent Information Systems, 2005, 25, 95-121.	3.9	132
51	Design and Analysis of Optimization Algorithms Using Computational Statistics. Applied Numerical Analysis and Computational Mathematics, 2004, 1, 413-433.	0.6	46
52	Neural network-based colonoscopic diagnosis using on-line learning and differential evolution. Applied Soft Computing Journal, 2004, 4, 369-379.	7.2	88
53	Parallelizing the Unsupervised k-Windows Clustering Algorithm. Lecture Notes in Computer Science, 2004, , 225-232.	1.3	11
54	Evolutionary Operators in Global Optimization with Dynamic Search Trajectories. Numerical Algorithms, 2003, 34, 393-403.	1.9	9

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55	Parallel Unsupervised k-Windows: An Efficient Parallel Clustering Algorithm. Lecture Notes in Computer Science, 2003, , 336-344.	1.3	4
56	Application of efficient composite methods for computing with certainty periodic orbits in molecular systems. Computer Physics Communications, 2002, 148, 227-235.	7.5	3
57	Parallel evolutionary training algorithms for â€œhardware-friendlyâ€•neural networks. Natural Computing, 2002, 1, 307-322.	3.0	60
58	Recent approaches to global optimization problems through Particle Swarm Optimization. Natural Computing, 2002, 1, 235-306.	3.0	1,131
59	Application of the Characteristic Bisection Method for locating and computing periodic orbits in molecular systems. Computer Physics Communications, 2001, 138, 53-68.	7.5	18
60	A class of gradient unconstrained minimization algorithms with adaptive stepsize. Journal of Computational and Applied Mathematics, 2000, 114, 367-386.	2.0	105
61	Globally Convergent Modification of the Quickprop Method. Neural Processing Letters, 2000, 12, 159-170.	3.2	12
62	Effective Backpropagation Training with Variable Stepsize. Neural Networks, 1997, 10, 69-82.	5.9	165
63	Locating and Computing All the Simple Roots and Extrema of a Function. SIAM Journal of Scientific Computing, 1996, 17, 1232-1248.	2.8	23
64	Locating, characterizing and computing the stationary points of a function. Reliable Computing, 1996, 2, 187-193.	0.8	1
65	An Efficient Method for Locating and Computing Periodic Orbits of Nonlinear Mappings. Journal of Computational Physics, 1995, 119, 105-119.	3.8	57
66	A short proof and a generalization of Mirandaâ€™s existence theorem. Proceedings of the American Mathematical Society, 1989, 107, 701-703.	0.8	21
67	Algorithm 666: Chabis: a mathematical software package for locating and evaluating roots of systems of nonlinear equations. ACM Transactions on Mathematical Software, 1988, 14, 330-336.	2.9	50
68	Solving systems of nonlinear equations using the nonzero value of the topological degree. ACM Transactions on Mathematical Software, 1988, 14, 312-329.	2.9	71