Donald C Wunsch Ii

List of Publications by Year
in descending order

110 papers	7,073 citations	186209 28 h-index	95218 68 g-index
112 all docs	112 docs citations	112 times ranked	6519 citing authors

#	Article	IF	Citations
1	Survey of Clustering Algorithms. IEEE Transactions on Neural Networks, 2005, 16, 645-678.	4.8	4,416
2	Clustering Algorithms in Biomedical Research: A Review. IEEE Reviews in Biomedical Engineering, 2010, 3, 120-154.	13.1	272
3	Adaptive critic designs: A case study for neurocontrol. Neural Networks, 1995, 8, 1367-1372.	3.3	172
4	Artificial Neural Networks for Control of a Grid-Connected Rectifier/Inverter Under Disturbance, Dynamic and Power Converter Switching Conditions. IEEE Transactions on Neural Networks and Learning Systems, 2014, 25, 738-750.	7.2	114
5	Leader–Follower Output Synchronization of Linear Heterogeneous Systems With Active Leader Using Reinforcement Learning. IEEE Transactions on Neural Networks and Learning Systems, 2018, 29, 2139-2153.	7.2	109
6	A proposition on memes and meta-memes in computing for higher-order learning. Memetic Computing, 2009, 1, 85-100.	2.7	108
7	A Comparison Study of Validity Indices on Swarm-Intelligence-Based Clustering. IEEE Transactions on Systems, Man, and Cybernetics, 2012, 42, 1243-1256.	5.5	99
8	Training Recurrent Neural Networks With the Levenberg–Marquardt Algorithm for Optimal Control of a Grid-Connected Converter. IEEE Transactions on Neural Networks and Learning Systems, 2015, 26, 1900-1912.	7.2	95
9	Optimal Containment Control of Unknown Heterogeneous Systems With Active Leaders. IEEE Transactions on Control Systems Technology, 2019, 27, 1228-1236.	3.2	80
10	Hamiltonian-Driven Adaptive Dynamic Programming for Continuous Nonlinear Dynamical Systems. IEEE Transactions on Neural Networks and Learning Systems, 2017, 28, 1929-1940.	7.2	74
11	Multiclass Cancer Classification Using Semisupervised Ellipsoid ARTMAP and Particle Swarm Optimization with Gene Expression Data. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2007, 4, 65-77.	1.9	68
12	Online barrier-actor-critic learning for H_∞ control with full-state constraints and input saturation. Journal of the Franklin Institute, 2020, 357, 3316-3344.	1.9	67
13	Data-Driven Robust Control of Discrete-Time Uncertain Linear Systems via Off-Policy Reinforcement Learning. IEEE Transactions on Neural Networks and Learning Systems, 2019, 30, 3735-3747.	7.2	63
14	Hamiltonian-Driven Hybrid Adaptive Dynamic Programming. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2021, 51, 6423-6434.	5.9	60
15	Safe Intermittent Reinforcement Learning With Static and Dynamic Event Generators. IEEE Transactions on Neural Networks and Learning Systems, 2020, 31, 5441-5455.	7.2	56
16	Neural-Network Vector Controller for Permanent-Magnet Synchronous Motor Drives: Simulated and Hardware-Validated Results. IEEE Transactions on Cybernetics, 2020, 50, 3218-3230.	6.2	53
17	Hamiltonian-Driven Adaptive Dynamic Programming With Approximation Errors. IEEE Transactions on Cybernetics, 2022, 52, 13762-13773.	6.2	51
18	Blood biomarkers for mild traumatic brain injury: a selective review of unresolved issues. Biomarker Research, 2021, 9, 70.	2.8	51

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19	A survey of adaptive resonance theory neural network models for engineering applications. Neural Networks, 2019, 120, 167-203.	3.3	50
20	Demand-Side Management of Domestic Electric Water Heaters Using Approximate Dynamic Programming. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2017, 36, 775-788.	1.9	47
21	Dynamic Intermittent Feedback Design for H_{∞} Containment Control on a Directed Graph. IEEE Transactions on Cybernetics, 2020, 50, 3752-3765.	6.2	46
22	An adaptive strategy via reinforcement learning for the prisoner dilemma game. IEEE/CAA Journal of Automatica Sinica, 2018, 5, 301-310.	8.5	44
23	A deeper look at plant uptake of environmental contaminants using intelligent approaches. Science of the Total Environment, 2019, 651, 561-569.	3.9	38
24	Examining plant uptake and translocation of emerging contaminants using machine learning: Implications to food security. Science of the Total Environment, 2020, 698, 133999.	3.9	36
25	Reinforcement Learning-Based Cooperative Optimal Output Regulation via Distributed Adaptive Internal Model. IEEE Transactions on Neural Networks and Learning Systems, 2022, 33, 5229-5240.	7.2	36
26	Clustering of high-dimensional gene expression data with feature filtering methods and diffusion maps. Artificial Intelligence in Medicine, 2010, 48, 91-98.	3.8	35
27	An adaptive recurrent neural-network controller using a stabilization matrix and predictive inputs to solve a tracking problem under disturbances. Neural Networks, 2014, 49, 74-86.	3.3	35
28	Detection and Identification of Vehicles Based on Their Unintended Electromagnetic Emissions. IEEE Transactions on Electromagnetic Compatibility, 2006, 48, 752-759.	1.4	32
29	Memristor-based LSTM network with in situ training and its applications. Neural Networks, 2020, 131, 300-311.	3.3	30
30	Development of Blast Furnace Burden Distribution Process Modeling and Control. ISIJ International, 2017, 57, 1350-1363.	0.6	28
31	Safety-Aware Reinforcement Learning Framework with an Actor-Critic-Barrier Structure. , 2019, , .		28
32	An Improved *N*-Step Value Gradient Learning Adaptive Dynamic Programming Algorithm for Online Learning. IEEE Transactions on Neural Networks and Learning Systems, 2020, 31, 1155-1169.	7.2	24
33	Online Model-Free *n*-Step HDP With Stability Analysis. IEEE Transactions on Neural Networks and Learning Systems, 2020, 31, 1255-1269.	7.2	24
34	Output Constrained Adaptive Controller Design for Nonlinear Saturation Systems. IEEE/CAA Journal of Automatica Sinica, 2021, 8, 441-454.	8.5	21
35	Dual vigilance fuzzy adaptive resonance theory. Neural Networks, 2019, 109, 1-5.	3.3	20
36	Clustering with differential evolution particle swarm optimization. , 2010, , .		19

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37	Vector control of a grid-connected rectifier/inverter using an artificial neural network. , 2012, , .		19
38	Sparse online kernelized actor-critic Learning in reproducing kernel Hilbert space. Artificial Intelligence Review, 2022, 55, 23-58.	9.7	19
39	Distributed dual vigilance fuzzy adaptive resonance theory learns online, retrieves arbitrarily-shaped clusters, and mitigates order dependence. Neural Networks, 2020, 121, 208-228.	3.3	17
40	Memristor-Based HTM Spatial Pooler With On-Device Learning for Pattern Recognition. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2022, 52, 1901-1915.	5.9	17
41	Evolutionary swarm neural network game engine for Capture Go. Neural Networks, 2010, 23, 295-305.	3.3	15
42	Heuristic dynamic programming for mobile robot path planning based on Dyna approach. , 2016, , .		15
43	A Kinetic Model for Blood Biomarker Levels After Mild Traumatic Brain Injury. Frontiers in Neurology, 2021, 12, 668606.	1.1	15
44	Training Winner-Take-All Simultaneous Recurrent Neural Networks. IEEE Transactions on Neural Networks, 2007, 18, 674-684.	4.8	14
45	The Boundedness Conditions for Model-Free HDP($lambda$). IEEE Transactions on Neural Networks and Learning Systems, 2019, 30, 1928-1942.	7.2	14
46	Incremental Cluster Validity Indices for Online Learning of Hard Partitions: Extensions and Comparative Study. IEEE Access, 2020, 8, 22025-22047.	2.6	14
47	Model Order Reduction Based on Agglomerative Hierarchical Clustering. IEEE Transactions on Neural Networks and Learning Systems, 2019, 30, 1881-1895.	7.2	13
48	Data-Driven Integral Reinforcement Learning for Continuous-Time Non-Zero-Sum Games. IEEE Access, 2019, 7, 82901-82912.	2.6	12
49	Faster Post-Earthquake Damage Assessment Based on 1D Convolutional Neural Networks. Applied Sciences (Switzerland), 2021, 11, 9844.	1.3	12
50	Neural Network Based Decentralized Controls of Large Scale Power Systems. , 2007, , .		11
51	ART properties of interest in engineering applications. , 2009, , .		11
52	A GPU based Parallel Hierarchical Fuzzy ART clustering. , 2011, , .		11
53	Vigilance adaptation in adaptive resonance theory. , 2013, , .		11
54	Levenberg-Marquardt and Conjugate Gradient methods applied to a high-order neural network. , 2013, , .		11

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55	Design of a K-Winners-Take-All Model With a Binary Spike Train. IEEE Transactions on Cybernetics, 2019, 49, 3131-3140.	6.2	11
56	Speeding up VLSI Layout Verification Using Fuzzy Attributed Graphs Approach. IEEE Transactions on Fuzzy Systems, 2006, 14, 728-737.	6.5	9
57	Divide and conquer evolutionary TSP solution for vehicle path planning. , 2008, , .		9
58	A bare-bones ant colony optimization algorithm that performs competitively on the sequential ordering problem. Memetic Computing, 2014, 6, 19-29.	2.7	8
59	Particle Swarm Optimization in an adaptive resonance framework. , 2015, , .		8
60	Containment Control of Heterogeneous Systems With Non-Autonomous Leaders: A Distributed Optimal Model Reference Approach. IEEE Access, 2018, 6, 60689-60703.	2.6	8
61	An Explainable and Statistically Validated Ensemble Clustering Model Applied to the Identification of Traumatic Brain Injury Subgroups. IEEE Access, 2020, 8, 180690-180705.	2.6	8
62	Clustering of cancer tissues using diffusion maps and fuzzy ART with gene expression data. , 2008, , .		7
63	Sorting the phenotypic heterogeneity of autism spectrum disorders: A hierarchical clustering model. , 2015, , .		7
64	Mobile robot control based on hybrid neuro-fuzzy value gradient reinforcement learning. , 2017, , .		7
65	Validity index-based vigilance test in adaptive resonance theory neural networks. , 2017, , .		7
66	Detection and Identification of Vehicles Based on Their Spark-Free Unintended Electromagnetic Emissions. IEEE Transactions on Electromagnetic Compatibility, 2018, 60, 1594-1597.	1.4	7
67	Model-Free Event-Triggered Containment Control of Multi-Agent Systems. , 2018, , .		7
68	A Game-theoretical Approach for a Finite-time Consensus of Second-order Multi-agent System. International Journal of Control, Automation and Systems, 2019, 17, 1071-1083.	1.6	7
69	Evaluation of standard and semantically-augmented distance metrics for neurology patients. BMC Medical Informatics and Decision Making, 2020, 20, 203.	1.5	7
70	Heterogeneity in Blood Biomarker Trajectories After Mild TBI Revealed by Unsupervised Learning. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2022, 19, 1365-1378.	1.9	7
71	A Survey of Neural Computation on Graphics Processing Hardware. , 2007, , .		6
72	Analysis of hyperspectral data with diffusion maps and Fuzzy ART. , 2009, , .		6

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73	Using default ARTMAP for cancer classification with MicroRNA expression signatures. , 2009, , .		6
74	Big data - a 21st century science Maginot Line? No-boundary thinking: shifting from the big data paradigm. BioData Mining, 2015, 8, 7.	2.2	6
75	Off-policy reinforcement learning for robust control of discrete-time uncertain linear systems. , 2017, , .		6
76	Time series prediction via two-step clustering. , 2015, , .		5
77	Safe Intermittent Reinforcement Learning for Nonlinear Systems. , 2019, , .		5
78	Approximate Dynamic Programming and Neural Networks on Game Hardware. Neural Networks (IJCNN), International Joint Conference on, 2007, , .	0.0	4
79	Nested-loop neural network vector control of permanent magnet synchronous motors. , 2013, , .		4
80	Forecasting Nodal Price Difference Between Day-Ahead and Real-Time Electricity Markets Using Long-Short Term Memory and Sequence-to-Sequence Networks. IEEE Access, 2022, 10, 832-843.	2.6	4
81	iCVI-ARTMAP: Using Incremental Cluster Validity Indices and Adaptive Resonance Theory Reset Mechanism to Accelerate Validation and Achieve Multiprototype Unsupervised Representations. IEEE Transactions on Neural Networks and Learning Systems, 2023, 34, 9757-9770.	7.2	4
82	Algorithms for derivation of structurally stable Hamiltonian signed graphs. International Journal of Computer Mathematics, 2004, 81, 1349-1356.	1.0	3
83	Unsupervised feature learning classification using an extreme learning machine. , 2013, , .		3
84	Containment control of heterogeneous systems with active leaders of bounded unknown control using reinforcement learning. , 2017, , .		3
85	Convergence of Recurrent Neuro-Fuzzy Value-Gradient Learning With and Without an Actor. IEEE Transactions on Fuzzy Systems, 2020, 28, 658-672.	6.5	3
86	Interfaith dialogue in medicine. Baylor University Medical Center Proceedings, 2020, 33, 140-143.	0.2	3
87	No-boundary thinking: a viable solution to ethical data-driven AI in precision medicine. AI and Ethics, 2022, 2, 635-643.	4.6	3
88	Comparisons Of An Adaptive Neural Network Based Controller And An Optimized Conventional Power System Stabilizer. Control Applications (CCA), Proceedings of the IEEE International Conference on, 2007, , .	0.0	2
89	A quantum calculus formulation of dynamic programming and ordered derivatives. , 2008, , .		2
90	Video compressive sensing with 3-D Wavelet and 3-D Noiselet. , 2012, , .		2

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91	Dynamic Intermittent Suboptimal Control: Performance Quantification and Comparisons. , 2018, , .		2
92	Forecast-Informed Energy Storage Utilization in Local Area Power Systems. IEEE Transactions on Sustainable Energy, 2019, 10, 1740-1751.	5.9	2
93	Neurotheology in interfaith dialogue. Baylor University Medical Center Proceedings, 2020, 33, 295-297.	0.2	2
94	Hybrid of Neural Classifier and Swarm Intelligence in Multiclass Cancer Diagnosis with Gene Expression Signatures. , 0, , 1-20.		1
95	Robotic go: Exploring a different perspective on human-computer interaction with the game of go. , 2009, , .		1
96	An extended EigenAnt colony system applied to the sequential ordering problem. , 2014, , .		1
97	Clustering algorithms. , 2020, , 29-100.		1
98	Local Stability and Convergence Analysis of Neural Network Controllers With Error Integral Inputs. IEEE Transactions on Neural Networks and Learning Systems, 2023, 34, 3751-3763.	7.2	1
99	Subsumption reduces dataset dimensionality without decreasing performance of a machine learning classifier. , 2021, 2021, 1618-1621.		1
100	AdaptiveResonance.jl: A Julia Implementation of Adaptive Resonance Theory (ART) Algorithms. Journal of Open Source Software, 2022, 7, 3671.	2.0	1
101	Neurocontrol of Turbogenerators with Derivative Adaptive Critics. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2000, 33, 83-88.	0.4	0
102	Decision theory on dynamic domains nabla derivatives and the Hamilton-Jacobi-Bellman equation. Conference Proceedings IEEE International Conference on Systems, Man, and Cybernetics, 2008, , .	0.0	0
103	Discovering objective functions for tagging medical text concepts. , 2014, , .		0
104	Enhancing supervisory training signals with environmental reinforcement learning using adaptive dynamic programming and artificial neural networks. , 2016, , .		0
105	Active stabilization of line-regulating converters with constant power loads. , 2017, , .		0
106	Off-Policy Integral Reinforcement Learning for Semi-Global Constrained Output Regulation of Continuous-Time Linear Systems. , 2018, , .		0
107	Model-free semi-global output regulation for discrete-time linear systems subject to input amplitude saturation. , 2018, , .		0
108	Model-Free Temporal Difference Learning for Non-Zero-Sum Games. , 2019, , .		0

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109	Adaptive Dynamic Programming in the Hamiltonian-Driven Framework. Studies in Systems, Decision and Control, 2021, , 189-214.	0.8	0
110	Comparative study using inverse ontology cogency and alternatives for concept recognition in the annotated National Library of Medicine database. Neural Networks, 2021, 139, 86-104.	3.3	0