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	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
2	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
3	Hamiltonian-Driven Adaptive Dynamic Programming With Approximation Errors. IEEE Transactions on Cybernetics, 2022, 52, 13762-13773.	6.2	51
4	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
5	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
6	Sparse online kernelized actor-critic Learning in reproducing kernel Hilbert space. Artificial Intelligence Review, 2022, 55, 23-58.	9.7	19
7	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
8	No-boundary thinking: a viable solution to ethical data-driven AI in precision medicine. AI and Ethics, 2022, 2, 635-643.	4.6	3
9	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
10	AdaptiveResonance.jl: A Julia Implementation of Adaptive Resonance Theory (ART) Algorithms. Journal of Open Source Software, 2022, 7, 3671.	2.0	1
11	Hamiltonian-Driven Hybrid Adaptive Dynamic Programming. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2021, 51, 6423-6434.	5.9	60
12	Adaptive Dynamic Programming in the Hamiltonian-Driven Framework. Studies in Systems, Decision and Control, 2021, , 189-214.	0.8	0
13	Output Constrained Adaptive Controller Design for Nonlinear Saturation Systems. IEEE/CAA Journal of Automatica Sinica, 2021, 8, 441-454.	8.5	21
14	A Kinetic Model for Blood Biomarker Levels After Mild Traumatic Brain Injury. Frontiers in Neurology, 2021, 12, 668606.	1.1	15
15	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
16	Blood biomarkers for mild traumatic brain injury: a selective review of unresolved issues. Biomarker Research, 2021, 9, 70.	2.8	51
17	Faster Post-Earthquake Damage Assessment Based on 1D Convolutional Neural Networks. Applied Sciences (Switzerland), 2021, 11, 9844.	1.3	12
18	Subsumption reduces dataset dimensionality without decreasing performance of a machine learning classifier. , 2021, 2021, 1618-1621.		1

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19	An Improved <i>N</i>-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
20	Online Model-Free <i>n</i>-Step HDP With Stability Analysis. IEEE Transactions on Neural Networks and Learning Systems, 2020, 31, 1255-1269.	7.2	24
21	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
22	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
23	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
24	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
25	Dynamic Intermittent Feedback Design for H_{infty} Containment Control on a Directed Graph. IEEE Transactions on Cybernetics, 2020, 50, 3752-3765.	6.2	46
26	Online barrier-actor-critic learning for Hâˇž control with full-state constraints and input saturation. Journal of the Franklin Institute, 2020, 357, 3316-3344.	1.9	67
27	Clustering algorithms. , 2020, , 29-100.		1
28	Memristor-based LSTM network with in situ training and its applications. Neural Networks, 2020, 131, 300-311.	3.3	30
29	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
30	Evaluation of standard and semantically-augmented distance metrics for neurology patients. BMC Medical Informatics and Decision Making, 2020, 20, 203.	1.5	7
31	Incremental Cluster Validity Indices for Online Learning of Hard Partitions: Extensions and Comparative Study. IEEE Access, 2020, 8, 22025-22047.	2.6	14
32	Neurotheology in interfaith dialogue. Baylor University Medical Center Proceedings, 2020, 33, 295-297.	0.2	2
33	Interfaith dialogue in medicine. Baylor University Medical Center Proceedings, 2020, 33, 140-143.	0.2	3
34	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
35	Design of a K-Winners-Take-All Model With a Binary Spike Train. IEEE Transactions on Cybernetics, 2019, 49, 3131-3140.	6.2	11
36	Data-Driven Integral Reinforcement Learning for Continuous-Time Non-Zero-Sum Games. IEEE Access, 2019, 7, 82901-82912.	2.6	12

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37	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
38	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
39	Safe Intermittent Reinforcement Learning for Nonlinear Systems. , 2019, , .		5
40	Model-Free Temporal Difference Learning for Non-Zero-Sum Games. , 2019, , .		0
41	A survey of adaptive resonance theory neural network models for engineering applications. Neural Networks, 2019, 120, 167-203.	3.3	50
42	Safety-Aware Reinforcement Learning Framework with an Actor-Critic-Barrier Structure. , 2019, , .		28
43	Forecast-Informed Energy Storage Utilization in Local Area Power Systems. IEEE Transactions on Sustainable Energy, 2019, 10, 1740-1751.	5.9	2
44	Model Order Reduction Based on Agglomerative Hierarchical Clustering. IEEE Transactions on Neural Networks and Learning Systems, 2019, 30, 1881-1895.	7.2	13
45	The Boundedness Conditions for Model-Free HDP(λ). IEEE Transactions on Neural Networks and Learning Systems, 2019, 30, 1928-1942.	7.2	14
46	Dual vigilance fuzzy adaptive resonance theory. Neural Networks, 2019, 109, 1-5.	3.3	20
47	A deeper look at plant uptake of environmental contaminants using intelligent approaches. Science of the Total Environment, 2019, 651, 561-569.	3.9	38
48	Optimal Containment Control of Unknown Heterogeneous Systems With Active Leaders. IEEE Transactions on Control Systems Technology, 2019, 27, 1228-1236.	3.2	80
49	Leaderâ€"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
50	An adaptive strategy via reinforcement learning for the prisoner dilemma game. IEEE/CAA Journal of Automatica Sinica, 2018, 5, 301-310.	8.5	44
51	Containment Control of Heterogeneous Systems With Non-Autonomous Leaders: A Distributed Optimal Model Reference Approach. IEEE Access, 2018, 6, 60689-60703.	2.6	8
52	Off-Policy Integral Reinforcement Learning for Semi-Global Constrained Output Regulation of Continuous-Time Linear Systems. , 2018, , .		0
53	Dynamic Intermittent Suboptimal Control: Performance Quantification and Comparisons. , 2018, , .		2
54	Model-free semi-global output regulation for discrete-time linear systems subject to input amplitude saturation. , 2018, , .		0

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55	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
56	Model-Free Event-Triggered Containment Control of Multi-Agent Systems. , 2018, , .		7
57	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
58	Mobile robot control based on hybrid neuro-fuzzy value gradient reinforcement learning. , 2017, , .		7
59	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
60	Off-policy reinforcement learning for robust control of discrete-time uncertain linear systems. , 2017, , .		6
61	Validity index-based vigilance test in adaptive resonance theory neural networks. , 2017, , .		7
62	Containment control of heterogeneous systems with active leaders of bounded unknown control using reinforcement learning. , 2017, , .		3
63	Active stabilization of line-regulating converters with constant power loads. , 2017, , .		0
64	Development of Blast Furnace Burden Distribution Process Modeling and Control. ISIJ International, 2017, 57, 1350-1363.	0.6	28
65	Enhancing supervisory training signals with environmental reinforcement learning using adaptive dynamic programming and artificial neural networks. , 2016, , .		0
66	Heuristic dynamic programming for mobile robot path planning based on Dyna approach. , 2016, , .		15
67	Sorting the phenotypic heterogeneity of autism spectrum disorders: A hierarchical clustering model. , 2015, , .		7
68	Particle Swarm Optimization in an adaptive resonance framework. , 2015, , .		8
69	Time series prediction via two-step clustering. , 2015, , .		5
70	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
71	Training Recurrent Neural Networks With the Levenbergâ€"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
72	An extended EigenAnt colony system applied to the sequential ordering problem. , 2014, , .		1

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73	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
74	A bare-bones ant colony optimization algorithm that performs competitively on the sequential ordering problem. Memetic Computing, 2014, 6, 19-29.	2.7	8
75	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
76	Discovering objective functions for tagging medical text concepts. , 2014, , .		0
77	Vigilance adaptation in adaptive resonance theory. , 2013, , .		11
78	Nested-loop neural network vector control of permanent magnet synchronous motors. , 2013, , .		4
79	Levenberg-Marquardt and Conjugate Gradient methods applied to a high-order neural network. , 2013, , .		11
80	Unsupervised feature learning classification using an extreme learning machine. , 2013, , .		3
81	Video compressive sensing with 3-D Wavelet and 3-D Noiselet. , 2012, , .		2
82	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
83	Vector control of a grid-connected rectifier/inverter using an artificial neural network. , 2012, , .		19
84	A GPU based Parallel Hierarchical Fuzzy ART clustering. , 2011, , .		11
85	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
86	Evolutionary swarm neural network game engine for Capture Go. Neural Networks, 2010, 23, 295-305.	3.3	15
87	Clustering with differential evolution particle swarm optimization. , 2010, , .		19
88	Clustering Algorithms in Biomedical Research: A Review. IEEE Reviews in Biomedical Engineering, 2010, 3, 120-154.	13.1	272
89	Analysis of hyperspectral data with diffusion maps and Fuzzy ART. , 2009, , .		6
90	ART properties of interest in engineering applications. , 2009, , .		11

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91	Robotic go: Exploring a different perspective on human-computer interaction with the game of go. , 2009, , .		1
92	A proposition on memes and meta-memes in computing for higher-order learning. Memetic Computing, 2009, 1, 85-100.	2.7	108
93	Using default ARTMAP for cancer classification with MicroRNA expression signatures. , 2009, , .		6
94	Divide and conquer evolutionary TSP solution for vehicle path planning. , 2008, , .		9
95	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
96	A quantum calculus formulation of dynamic programming and ordered derivatives. , 2008, , .		2
97	Clustering of cancer tissues using diffusion maps and fuzzy ART with gene expression data. , 2008, , .		7
98	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
99	A Survey of Neural Computation on Graphics Processing Hardware. , 2007, , .		6
100	Training Winner-Take-All Simultaneous Recurrent Neural Networks. IEEE Transactions on Neural Networks, 2007, 18, 674-684.	4.8	14
101	Neural Network Based Decentralized Controls of Large Scale Power Systems. , 2007, , .		11
102	Approximate Dynamic Programming and Neural Networks on Game Hardware. Neural Networks (IJCNN), International Joint Conference on, 2007, , .	0.0	4
103	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
104	Detection and Identification of Vehicles Based on Their Unintended Electromagnetic Emissions. IEEE Transactions on Electromagnetic Compatibility, 2006, 48, 752-759.	1.4	32
105	Speeding up VLSI Layout Verification Using Fuzzy Attributed Graphs Approach. IEEE Transactions on Fuzzy Systems, 2006, 14, 728-737.	6.5	9
106	Survey of Clustering Algorithms. IEEE Transactions on Neural Networks, 2005, 16, 645-678.	4.8	4,416
107	Algorithms for derivation of structurally stable Hamiltonian signed graphs. International Journal of Computer Mathematics, 2004, 81, 1349-1356.	1.0	3
108	Neurocontrol of Turbogenerators with Derivative Adaptive Critics. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2000, 33, 83-88.	0.4	0

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109	Adaptive critic designs: A case study for neurocontrol. Neural Networks, 1995, 8, 1367-1372.	3.3	172
110	Hybrid of Neural Classifier and Swarm Intelligence in Multiclass Cancer Diagnosis with Gene Expression Signatures. , 0, , 1-20.		1