

Benjamin Schrauwen

List of Publications by Year in descending order

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59
papers

3,552
citations

218677

26
h-index

243625

44
g-index

61
all docs

61
docs citations

61
times ranked

2845
citing authors

#	ARTICLE	IF	CITATIONS
1	Oncilla Robot: A Versatile Open-Source Quadruped Research Robot With Compliant Pantograph Legs. <i>Frontiers in Robotics and AI</i> , 2018, 5, 67.	3.2	34
2	On Learning Navigation Behaviors for Small Mobile Robots With Reservoir Computing Architectures. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2015, 26, 763-780.	11.3	53
3	Memristor Models for Machine Learning. <i>Neural Computation</i> , 2015, 27, 725-747.	2.2	39
4	True Zero-Training Brain-Computer Interfacing “An Online Study. <i>PLoS ONE</i> , 2014, 9, e102504.	2.5	61
5	Toward Unified Hybrid Simulation Techniques for Spiking Neural Networks. <i>Neural Computation</i> , 2014, 26, 1055-1079.	2.2	6
6	End-to-end learning for music audio. , 2014, , .		194
7	Design and control of compliant tensegrity robots through simulation and hardware validation. <i>Journal of the Royal Society Interface</i> , 2014, 11, 20140520.	3.4	192
8	Frequency modulation of large oscillatory neural networks. <i>Biological Cybernetics</i> , 2014, 108, 145-157.	1.3	12
9	Experimental demonstration of reservoir computing on a silicon photonics chip. <i>Nature Communications</i> , 2014, 5, 3541.	12.8	545
10	Integrating dynamic stopping, transfer learning and language models in an adaptive zero-training ERP speller. <i>Journal of Neural Engineering</i> , 2014, 11, 035005.	3.5	75
11	Nanophotonic Reservoir Computing With Photonic Crystal Cavities to Generate Periodic Patterns. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2014, 25, 344-355.	11.3	42
12	Automated Design of Complex Dynamic Systems. <i>PLoS ONE</i> , 2014, 9, e86696.	2.5	16
13	Optimized Parameter Search for Large Datasets of the Regularization Parameter and Feature Selection for Ridge Regression. <i>Neural Processing Letters</i> , 2013, 38, 403-416.	3.2	12
14	Real-time detection of epileptic seizures in animal models using reservoir computing. <i>Epilepsy Research</i> , 2013, 103, 124-134.	1.6	30
15	Time series classification for the prediction of dialysis in critically ill patients using echo statenetworks. <i>Engineering Applications of Artificial Intelligence</i> , 2013, 26, 984-996.	8.1	19
16	A Unified Probabilistic Approach to Improve Spelling in an Event-Related Potential-Based Brain-Computer Interface. <i>IEEE Transactions on Biomedical Engineering</i> , 2013, 60, 2696-2705.	4.2	31
17	Terrain Classification for a Quadruped Robot. , 2013, , .		14
18	Comparing trotting and turning strategies on the quadrupedal oncilla robot. , 2013, , .		5

#	ARTICLE	IF	CITATIONS
19	Event management for large scale event-driven digital hardware spiking neural networks. Neural Networks, 2013, 45, 83-93.	5.9	3
20	The spectral radius remains a valid indicator of the Echo state property for large reservoirs. , 2013, , .		18
21	Recent advances in optical Reservoir Computing. , 2013, , .		0
22	Information Processing Capacity of Dynamical Systems. Scientific Reports, 2012, 2, 514.	3.3	242
23	Cascadable excitability in microrings. Optics Express, 2012, 20, 20292.	3.4	107
24	Time-domain and frequency-domain modeling of nonlinear optical components at the circuit-level using a node-based approach. Journal of the Optical Society of America B: Optical Physics, 2012, 29, 896.	2.1	69
25	Reservoir Computing Trends. KI - Kunstliche Intelligenz, 2012, 26, 365-371.	3.2	274
26	A Bayesian Model for Exploiting Application Constraints to Enable Unsupervised Training of a P300-based BCI. PLoS ONE, 2012, 7, e33758.	2.5	55
27	Recurrent Kernel Machines: Computing with Infinite Echo State Networks. Neural Computation, 2012, 24, 104-133.	2.2	64
28	Learning slow features with reservoir computing for biologically-inspired robot localization. Neural Networks, 2012, 25, 178-190.	5.9	9
29	Towards a Neural Hierarchy of Time Scales for Motor Control. Lecture Notes in Computer Science, 2012, , 146-155.	1.3	1
30	Dynamic Stopping Improves the Speed and Accuracy of a P300 Speller. Lecture Notes in Computer Science, 2012, , 661-668.	1.3	9
31	Optical signal processing with a network of semiconductor optical amplifiers in the context of photonic reservoir computing. Proceedings of SPIE, 2011, , .	0.8	0
32	Automatic detection of epileptic seizures on the intra-cranial electroencephalogram of rats using reservoir computing. Artificial Intelligence in Medicine, 2011, 53, 215-223.	6.5	33
33	Parallel Reservoir Computing Using Optical Amplifiers. IEEE Transactions on Neural Networks, 2011, 22, 1469-1481.	4.2	155
34	Advances in photonic reservoir computing on an integrated platform. , 2011, , .		1
35	Photonic reservoir computing and information processing with coupled semiconductor optical amplifiers. , 2011, , .		8
36	Memory in linear recurrent neural networks in continuous time. Neural Networks, 2010, 23, 341-355.	5.9	46

#	ARTICLE	IF	CITATIONS
37	Memory versus non-linearity in reservoirs. , 2010, , .		56
38	Fast and Exact Simulation Methods Applied on a Broad Range of Neuron Models. Neural Computation, 2010, 22, 1468-1472.	2.2	6
39	Connectivity, Dynamics, and Memory in Reservoir Computing with Binary and Analog Neurons. Neural Computation, 2010, 22, 1272-1311.	2.2	138
40	Photonic reservoir computing: A new approach to optical information processing. , 2010, , .		4
41	Realization of a passive compliant robot dog. , 2010, , .		8
42	Supervised learning of internal models for autonomous goal-oriented robot navigation using Reservoir Computing. , 2010, , .		12
43	Towards autonomous self-localization of small mobile robots using reservoir computing and slow feature analysis. , 2009, , .		2
44	Accelerating Event-Driven Simulation of Spiking Neurons with Multiple Synaptic Time Constants. Neural Computation, 2009, 21, 1068-1099.	2.2	22
45	Modular reservoir computing networks for imitation learning of multiple robot behaviors. , 2009, , .		8
46	Design of a Central Pattern Generator Using Reservoir Computing for Learning Human Motion. , 2009, , .		21
47	On the Quantification of Dynamics in Reservoir Computing. Lecture Notes in Computer Science, 2009, , 985-994.	1.3	28
48	Compact hardware liquid state machines on FPGA for real-time speech recognition. Neural Networks, 2008, 21, 511-523.	5.9	107
49	Improving reservoirs using intrinsic plasticity. Neurocomputing, 2008, 71, 1159-1171.	5.9	229
50	Toward optical signal processing using Photonic Reservoir Computing. Optics Express, 2008, 16, 11182.	3.4	190
51	Imitation Learning of an Intelligent Navigation System for Mobile Robots Using Reservoir Computing. Brazilian Symposium on Neural Networks, Proceedings of the, 2008, , .	0.0	5
52	Mobile robot control in the road sign problem using Reservoir Computing networks. , 2008, , .		16
53	Modeling multiple autonomous robot behaviors and behavior switching with a single reservoir computing network. Conference Proceedings IEEE International Conference on Systems, Man, and Cybernetics, 2008, , .	0.0	8
54	Band-pass Reservoir Computing. , 2008, , .		24

#	ARTICLE	IF	CITATIONS
55	Compact hardware for real-time speech recognition using a Liquid State Machine. Neural Networks (IJCNN), International Joint Conference on, 2007, , .	0.0	11
56	Generative Modeling of Autonomous Robots and their Environments using Reservoir Computing. Neural Processing Letters, 2007, 26, 233-249.	3.2	35
57	The Introduction of Time-Scales in Reservoir Computing, Applied to Isolated Digits Recognition. Lecture Notes in Computer Science, 2007, , 471-479.	1.3	130
58	Event Detection and Localization in Mobile Robot Navigation Using Reservoir Computing. Lecture Notes in Computer Science, 2007, , 660-669.	1.3	9
59	Accelerating Event Based Simulation for Multi-synapse Spiking Neural Networks. Lecture Notes in Computer Science, 2006, , 760-769.	1.3	2