Liam Maguire

List of Publications by Year
in descending order

98 papers	2,401 citations	201575 27 h-index	243529 44 g-index
101 all docs	101 docs citations	101 times ranked	2403 citing authors

#	Article	IF	Citations
1	Challenges for large-scale implementations of spiking neural networks on FPGAs. Neurocomputing, 2007, 71, 13-29.	3.5	209
2	Employing dynamic fuzzy membership functions to assess environmental performance in the supplier selection process. International Journal of Production Research, 2006, 44, 2379-2419.	4.9	120
3	Selecting Critical Patterns Based on Local Geometrical and Statistical Information. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2011, 33, 1189-1201.	9.7	109
4	Statistical and computational intelligence techniques for inferential model development: a comparative evaluation and a novel proposition for fusion. Engineering Applications of Artificial Intelligence, 2004, 17, 871-885.	4.3	98
5	An experimental evaluation of novelty detection methods. Neurocomputing, 2014, 135, 313-327.	3.5	96
6	An online supervised learning method for spiking neural networks with adaptive structure. Neurocomputing, 2014, 144, 526-536.	3.5	87
7	Minimizing the bullwhip effect in a supply chain using genetic algorithms. International Journal of Production Research, 2006, 44, 1523-1543.	4.9	83
8	A review of rapid serial visual presentation-based brainâ€“computer interfaces. Journal of Neural Engineering, 2018, 15, 021001.	1.8	81
9	A practical computerized decision support system for predicting the severity of Alzheimer's disease of an individual. Expert Systems With Applications, 2019, 130, 157-171.	4.4	73
10	DL-ReSuMe: A Delay Learning-Based Remote Supervised Method for Spiking Neurons. IEEE Transactions on Neural Networks and Learning Systems, 2015, 26, 3137-3149.	7.2	69
11	A Supervised Learning Algorithm for Learning Precise Timing of Multiple Spikes in Multilayer Spiking Neural Networks. IEEE Transactions on Neural Networks and Learning Systems, 2018, 29, 5394-5407.	7.2	59
12	Gray matter concentration and effective connectivity changes in Alzheimerâ€™s disease: a longitudinal structural MRI study. Neuroradiology, 2011, 53, 733-748.	1.1	53
13	Learning under weight constraints in networks of temporal encoding spiking neurons. Neurocomputing, 2006, 69, 1912-1922.	3.5	50
14	Online traffic-aware fault detection for networks-on-chip. Journal of Parallel and Distributed Computing, 2014, 74, 1984-1993.	2.7	44
15	A hybrid computational approach for efficient Alzheimerâ€™s disease classification based on heterogeneous data. Scientific Reports, 2018, 8, 9774.	1.6	43
16	Low cost fault-tolerant routing algorithm for Networks-on-Chip. Microprocessors and Microsystems, 2015, 39, 358-372.	1.8	42
17	Scalable Networks-on-Chip Interconnected Architecture for Astrocyte-Neuron Networks. IEEE Transactions on Circuits and Systems I: Regular Papers, 2016, 63, 2290-2303.	3.5	40
18	Metastable neural dynamics in Alzheimer's disease are disrupted by lesions to the structural connectome. NeuroImage, 2018, 183, 438-455.	2.1	34

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19	Intelligent User Support in Autonomous Remote Experimentation Environments. IEEE Transactions on Industrial Electronics, 2008, 55, 2355-2367.	5.2	33
20	Model-based bifurcation and power spectral analyses of thalamocortical alpha rhythm slowing in Alzheimer's Disease. Neurocomputing, 2013, 115, 11-22.	3.5	33
21	A visual attention model based on hierarchical spiking neural networks. Neurocomputing, 2013, 116, 3-12.	3.5	33
22	Compensating for synaptic loss in Alzheimerâ€™s disease. Journal of Computational Neuroscience, 2014, 36, 19-37.	0.6	33
23	Multi-Kernel Learning with Dartel Improves Combined MRI-PET Classification of Alzheimerâ€™s Disease in AIBL Data: Group and Individual Analyses. Frontiers in Human Neuroscience, 2017, 11, 380.	1.0	32
24	Clientâ€“server architecture for collaborative remote experimentation. Journal of Network and Computer Applications, 2007, 30, 1295-1308.	5.8	31
25	Reducing the negative effects of sales promotions in supply chains using genetic algorithms. Expert Systems With Applications, 2009, 36, 7827-7837.	4.4	31
26	Computational Study of Hippocampal-Septal Theta Rhythm Changes Due to Beta-Amyloid-Altered Ionic Channels. PLoS ONE, 2011, 6, e21579.	1.1	30
27	Edge Detection Based on Spiking Neural Network Model. Lecture Notes in Computer Science, 2007, , 26-34.	1.0	30
28	Spiking Neural Network Model of Sound Localization Using the Interaural Intensity Difference. IEEE Transactions on Neural Networks and Learning Systems, 2012, 23, 574-586.	7.2	29
29	Metastable neural dynamics underlies cognitive performance across multiple behavioural paradigms. Human Brain Mapping, 2020, 41, 3212-3234.	1.9	28
30	AN STDP TRAINING ALGORITHM FOR A SPIKING NEURAL NETWORK WITH DYNAMIC THRESHOLD NEURONS. International Journal of Neural Systems, 2010, 20, 463-480.	3.2	27
31	Beta-amyloid induced changes in A-type K+ current can alter hippocampo-septal network dynamics. Journal of Computational Neuroscience, 2012, 32, 465-477.	0.6	27
32	Evaluation of Sampling Methods for Learning from Imbalanced Data. Lecture Notes in Computer Science, 2013, , 392-401.	1.0	27
33	Using simulation-based system dynamics and genetic algorithms to reduce the cash flow bullwhip in the supply chain. International Journal of Production Research, 2020, 58, 5253-5279.	4.9	27
34	Using a fuzzy approach to support financial analysis in the corporate acquisition process. Expert Systems With Applications, 2004, 27, 533-547.	4.4	25
35	Processing visual stimuli using hierarchical spiking neural networks. Neurocomputing, 2008, 71, 2055-2068.	3.5	24
36	A cognitive robotic ecology approach to self-configuring and evolving AAL systems. Engineering Applications of Artificial Intelligence, 2015, 45, 269-280.	4.3	24

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37	Compensating for thalamocortical synaptic loss in Alzheimer's disease. Frontiers in Computational Neuroscience, 2014, 8, 65.	1.2	22
38	Disrupted Thalamus White Matter Anatomy and Posterior Default Mode Network Effective Connectivity in Amnestic Mild Cognitive Impairment. Frontiers in Aging Neuroscience, 2017, 9, 370.	1.7	22
39	Quantitative analysis of breast cancer diagnosis using a probabilistic modelling approach. Computers in Biology and Medicine, 2018, 92, 168-175.	3.9	21
40	AN FPGA HARDWARE/SOFTWARE CO-DESIGN TOWARDS EVOLVABLE SPIKING NEURAL NETWORKS FOR ROBOTICS APPLICATION. International Journal of Neural Systems, 2010, 20, 447-461.	3.2	20
41	A comparison of fuzzy strategies for corporate acquisition analysis. Fuzzy Sets and Systems, 2007, 158, 2039-2056.	1.6	19
42	Downstream performance prediction for a manufacturing system using neural networks and six-sigma improvement techniques. Robotics and Computer-Integrated Manufacturing, 2009, 25, 513-521.	6.1	19
43	Genetic algorithm driven hardwareâ€“software partitioning for dynamically reconfigurable embedded systems. Microprocessors and Microsystems, 2001, 25, 263-274.	1.8	16
44	Self-repairing hardware with astrocyte-neuron networks. , 2016, , .		16
45	Speed of Rapid Serial Visual Presentation of Pictures, Numbers and Words Affects Event-Related Potential-Based Detection Accuracy. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2020, 28, 113-122.	2.7	16
46	Robotic UBIquitous COgnitive Network. Advances in Intelligent and Soft Computing, 2012, , 191-195.	0.2	16
47	2D co-ordinate transformation based on a spike timing-dependent plasticity learning mechanism. Neural Networks, 2008, 21, 1318-1327.	3.3	14
48	A Model Selection Method for Nonlinear System Identification Based fMRI Effective Connectivity Analysis. IEEE Transactions on Medical Imaging, 2011, 30, 1365-1380.	5.4	14
49	Receptive field optimisation and supervision of a fuzzy spiking neural network. Neural Networks, 2011, 24, 247-256.	3.3	14
50	Fault diagnosis of electronic system using artificial intelligence. IEEE Instrumentation and Measurement Magazine, 2002, 5, 16-20.	1.2	13
51	Comparative Investigation into Classical and Spiking Neuron Implementations on FPGAs. Lecture Notes in Computer Science, 2005, , 269-274.	1.0	13
52	A least angle regression method for fMRI activation detection in phase-encoded experimental designs. NeuroImage, 2010, 52, 1390-1400.	2.1	13
53	Learning Mechanisms in Networks of Spiking Neurons. , 2007, , 171-197.		13
54	Online versus offline learning for spiking neural networks: A review and new strategies. , 2010, , .		12

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55	Applying genetic algorithms to dampen the impact of price fluctuations in a supply chain. International Journal of Production Research, 2012, 50, 5396-5414.	4.9	12
56	Knowledge Discovery from Decision Tables by the Use of Multiple-Valued Logic. Artificial Intelligence Review, 2003, 19, 153-176.	9.7	11
57	Area Efficient Architecture for Large Scale Implementation of Biologically Plausible Spiking Neural Networks on Reconfigurable Hardware. , 2006, , .		11
58	Motion Detection Using Spiking Neural Network Model. Lecture Notes in Computer Science, 2008, , 76-83.	1.0	11
59	Colour Image Segmentation Based on a Spiking Neural Network Model Inspired by the Visual System. Lecture Notes in Computer Science, 2010, , 49-57.	1.0	11
60	Disentangling causal relationships of a manufacturing process using genetic algorithms and six-sigma techniques. International Journal of Production Research, 2008, 46, 6251-6268.	4.9	9
61	Constructing minimum volume surfaces using level set methods for novelty detection. , 2012, , .		8
62	A user-centred corporate acquisition system: a dynamic fuzzy membership functions approach. Decision Support Systems, 2006, 42, 162-185.	3.5	7
63	Thalamocortical circuitry and alpha rhythm slowing: An empirical study based on a classic computational model. , 2010, , .		7
64	Online fault detection for Networks-on-Chip interconnect. , 2014, , .		7
65	Long Timescale fMRI Neuronal Adaptation Effects in Human Amblyopic Cortex. PLoS ONE, 2011, 6, e26562.	1.1	7
66	Issues in the development of an integrated environment for embedded system design. Microprocessors and Microsystems, 1999, 23, 199-206.	1.8	6
67	Development of Cognitive Capabilities for Smart Home using a Self-Organizing Fuzzy Neural Network. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 447-454.	0.4	6
68	A Least Trimmed Square Regression Method for Second Level fMRI Effective Connectivity Analysis. Neuroinformatics, 2013, 11, 105-118.	1.5	6
69	Low Overhead Monitor Mechanism for Fault-Tolerant Analysis of NoC. , 2014, , .		6
70	Implementing Fuzzy Reasoning on a Spiking Neural Network. Lecture Notes in Computer Science, 2008, , 258-267.	1.0	6
71	Spiking Neural Network Performs Discrete Cosine Transform for Visual Images. Lecture Notes in Computer Science, 2009, , 21-29.	1.0	6
72	Issues in the development of an integrated environment for embedded system design. Microprocessors and Microsystems, 1999, 23, 191-197.	1.8	4

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73	Remembering Key Features of Visual Images Based on Spike Timing Dependent Plasticity of Spiking Neurons. , 2009, , .		4
74	Detection of Straight Lines Using a Spiking Neural Network Model. , 2009, , .		4
75	A locally adaptive boundary evolution algorithm for novelty detection using level set methods. , 2014, , .		4
76	Dynamically Evolving Spiking Neural network for pattern recognition. , 2015, , .		4
77	Spectral and Non-linear Analysis of Thalamocortical Neural Mass Model Oscillatory Dynamics. , 2014, , 87-112.		4
78	Simulation of Intelligent Computational Models in Biological Systems. , 2007, , .		3
79	Feature extraction from spectro-temporal signals using dynamic synapses, recurrency, and lateral inhibition. , 2010, , .		3
80	Lateral inhibitory networks: Synchrony, edge enhancement, and noise reduction. , 2011, , .		3
81	Employing neuronal networks to investigate the pathophysiological basis of abnormal cortical oscillations in Alzheimer's disease. , 2011, 2011, 2065-8.		3
82	Synchrony: A spiking-based mechanism for processing sensory stimuli. Neural Networks, 2012, 32, 26-34.	3.3	3
83	A Model-View-Controller (MVC) architecture for contextual visualisation of task-based multi-dimensional energy KPIs in a manufacturing process. International Journal of Ambient Energy, 2018, 39, 406-413.	1.4	3
84	Neural Circuit Models and Neuropathological Oscillations. , 2014, , 673-702.		3
85	Dataset Selection for Training One-Class Support Vector Machines. , 2009, , .		2
86	Intra- and inter-connectivity influences on event related changes in thalamocortical alpha rhythms. , 2010, , .		2
87	Case study: Impact of auxiliary energy in manufacturing operations. , 2018, , .		2
88	Simulation of Visual Attention Using Hierarchical Spiking Neural Networks. Lecture Notes in Computer Science, 2012, , 26-31.	1.0	2
89	On-chip and Off-chip Real-Time Debugging for Remotely-Accessed Embedded Programmable Systems. Lecture Notes in Computer Science, 2003, , 1079-1082.	1.0	1
90	Development of a self sustaining cognitive architecture. Biologically Inspired Cognitive Architectures, 2013, 6, 96-108.	0.9	1

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91	Maximum likelihood estimation for second level fMRI data analysis with expectation trust region algorithm. Magnetic Resonance Imaging, 2014, 32, 132-149.	1.0	1
92	Fine-Grained Fault-Tolerant Adaptive Routing for Networks-on-Chip. Lecture Notes in Computer Science, 2015, , 492-505.	1.0	1
93	Does Soft Computing Classify Research in Spiking Neural Networks?. International Journal of Computational Intelligence Systems, 2010, 3, 176-189.	1.6	0
94	INTRODUCTION. International Journal of Neural Systems, 2014, 24, 1403002.	3.2	0
95	Modelling Cortical and Thalamocortical Synaptic Loss and Compensation Mechanisms in Alzheimerâ€™s Disease. Springer Series in Computational Neuroscience, 2015, , 221-275.	0.3	0
96	Simulation-based system dynamics optimization modelling of supply chain working capital management under lead time uncertainty. , 2018, , .		0
97	Primary care use of laboratory tests in Northern Irelandâ€™s Western Health and Social Care Trust: a cross-sectional study. BMJ Open, 2019, 9, e026647.	0.8	0
98	Statistical Methods for fMRI Activation and Effective Connectivity Studies. , 2014, , 647-672.		0