Chai Quek

List of Publications by Year
in descending order

157 papers	4,458 citations	94433 37 h-index	128289 60 g-index
158 all docs	158 docs citations	158 times ranked	3374 citing authors

#	ARTICLE	IF	CITATIONS
1	Optimizing the Channel Selection and Classification Accuracy in EEG-Based BCI. IEEE Transactions on Biomedical Engineering, 2011, 58, 1865-1873.	4.2	333
2	Video Processing From Electro-Optical Sensors for Object Detection and Tracking in a Maritime Environment: A Survey. IEEE Transactions on Intelligent Transportation Systems, 2017, 18, 1993-2016.	8.0	246
3	POP-TRAFFIC: A Novel Fuzzy Neural Approach to Road Traffic Analysis and Prediction. IEEE Transactions on Intelligent Transportation Systems, 2006, 7, 133-146.	8.0	167
4	GenSoFNN: a generic self-organizing fuzzy neural network. IEEE Transactions on Neural Networks, 2002, 13, 1075-1086.	4.2	153
5	ElliFit: An unconstrained, non-iterative, least squares based geometric Ellipse Fitting method. Pattern Recognition, 2013, 46, 1449-1465.	8.1	131
6	A novel application of a neuro-fuzzy computational technique in event-based rainfallâ€"runoff modeling. Expert Systems With Applications, 2010, 37, 7456-7468.	7.6	113
7	Optimizing Spatial Filters by Minimizing Within-Class Dissimilarities in Electroencephalogram-Based Brainâ€"Computer Interface. IEEE Transactions on Neural Networks and Learning Systems, 2013, 24, 610-619.	11.3	112
8	Stock Trading Using RSPOP: A Novel Rough Set-Based Neuro-Fuzzy Approach. IEEE Transactions on Neural Networks, 2006, 17, 1301-1315.	4.2	105
9	A novel cognitive interpretation of breast cancer thermography with complementary learning fuzzy neural memory structure. Expert Systems With Applications, 2007, 33, 652-666.	7.6	100
10	GA-TSKfnn: Parameters tuning of fuzzy neural network using genetic algorithms. Expert Systems With Applications, 2005, 29, 769-781.	7.6	99
11	RSPOP: Rough Setâ€"Based Pseudo Outer-Product Fuzzy Rule Identification Algorithm. Neural Computation, 2005, 17, 205-243.	2.2	99
12	Popfnn-cri(s): pseudo outer product based fuzzy neural network using the compositional rule of inference and singleton fuzzifier. IEEE Transactions on Systems, Man, and Cybernetics, 2003, 33, 838-849.	5.0	92
13	Driving Profile Modeling and Recognition Based on Soft Computing Approach. IEEE Transactions on Neural Networks, 2009, 20, 563-582.	4.2	83
14	ERNN: A Biologically Inspired Feedforward Neural Network to Discriminate Emotion From EEG Signal. IEEE Transactions on Neural Networks and Learning Systems, 2014, 25, 609-620.	11.3	82
15	EEG Data Space Adaptation to Reduce Intersession Nonstationarity in Brain-Computer Interface. Neural Computation, 2013, 25, 2146-2171.	2.2	74
16	A novel framework for making dominant point detection methods non-parametric. Image and Vision Computing, 2012, 30, 843-859.	4.5	70
17	A Brain-Computer Interface for classifying EEG correlates of chronic mental stress. , 2011, , .		69
18	A novel single-pass thinning algorithm and an effective set of performance criteria. Pattern Recognition Letters, 1995, 16, 1267-1275.	4.2	67

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19	A Novel Generic Hebbian Ordering-Based Fuzzy Rule Base Reduction Approach to Mamdani Neuro-Fuzzy System. Neural Computation, 2007, 19, 1656-1680.	2.2	62
20	Stock trading with cycles: A financial application of ANFIS and reinforcement learning. Expert Systems With Applications, 2011, 38, 4741-4755.	7.6	62
21	Backward Fuzzy Rule Interpolation. IEEE Transactions on Fuzzy Systems, 2014, 22, 1682-1698.	9.8	62
22	Cultural dependency analysis for understanding speech emotion. Expert Systems With Applications, 2012, 39, 5115-5133.	7.6	60
23	Fuzzylot: a novel self-organising fuzzy-neural rule-based pilot system for automated vehicles. Neural Networks, 2001, 14, 1099-1112.	5.9	58
24	Runoff forecasting using a Takagi–Sugeno neuro-fuzzy model with online learning. Journal of Hydrology, 2013, 488, 17-32.	5.4	55
25	GenSo-FDSS: a neural-fuzzy decision support system for pediatric ALL cancer subtype identification using gene expression data. Artificial Intelligence in Medicine, 2005, 33, 61-88.	6.5	53
26	FCMAC-Yager: A Novel Yager-Inference-Scheme-Based Fuzzy CMAC. IEEE Transactions on Neural Networks, 2006, 17, 1394-1410.	4.2	51
27	eFSM–A Novel Online Neural-Fuzzy Semantic Memory Model. IEEE Transactions on Neural Networks, 2010, 21, 136-157.	4.2	51
28	FCMAC-EWS: A bank failure early warning system based on a novel localized pattern learning and semantically associative fuzzy neural network. Expert Systems With Applications, 2008, 34, 989-1003.	7.6	50
29	SaFIN: A Self-Adaptive Fuzzy Inference Network. IEEE Transactions on Neural Networks, 2011, 22, 1928-1940.	4.2	50
30	FITSK: online local learning with generic fuzzy input Takagi-Sugeno-Kang fuzzy framework for nonlinear system estimation. IEEE Transactions on Systems, Man, and Cybernetics, 2006, 36, 166-178.	5.0	48
31	Object Detection in a Maritime Environment: Performance Evaluation of Background Subtraction Methods. IEEE Transactions on Intelligent Transportation Systems, 2019, 20, 1787-1802.	8.0	48
32	Antiforgery: a novel pseudo-outer product based fuzzy neural network driven signature verification system. Pattern Recognition Letters, 2002, 23, 1795-1816.	4.2	47
33	A fully-online Neuro-Fuzzy model for flow forecasting in basins with limited data. Journal of Hydrology, 2017, 545, 424-435.	5.4	47
34	BIOLOGICAL BRAIN-INSPIRED GENETIC COMPLEMENTARY LEARNING FOR STOCK MARKET AND BANK FAILURE PREDICTION. Computational Intelligence, 2007, 23, 236-261.	3.2	45
35	A novel approach to the derivation of fuzzy membership functions using the Falcon-MART architecture. Pattern Recognition Letters, 2001, 22, 941-958.	4.2	44
36	Ovarian cancer diagnosis with complementary learning fuzzy neural network. Artificial Intelligence in Medicine, 2008, 43, 207-222.	6.5	44

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37	Rough-fuzzy rule interpolation. Information Sciences, 2016, 351, 1-17.	6.9	44
38	Financial volatility trading using a self-organising neural-fuzzy semantic network and option straddle-based approach. Expert Systems With Applications, 2011, 38, 4668-4688.	7.6	42
39	Financial Market Trading System With a Hierarchical Coevolutionary Fuzzy Predictive Model. IEEE Transactions on Evolutionary Computation, 2009, 13, 56-70.	10.0	39
40	MCES: A Novel Monte Carlo Evaluative Selection Approach for Objective Feature Selections. IEEE Transactions on Neural Networks, 2007, 18, 431-448.	4.2	36
41	A Novel Blood Glucose Regulation Using TSK^{0}-FCMAC: A Fuzzy CMAC Based on the Zero-Ordered TSK Fuzzy Inference Scheme. IEEE Transactions on Neural Networks, 2009, 20, 856-871.	4.2	36
42	Novel Self-Organizing Takagi Sugeno Kang Fuzzy Neural Networks Based on ART-like Clustering. Neural Processing Letters, 2004, 20, 39-51.	3.2	35
43	A BCM Theory of Meta-Plasticity for Online Self-Reorganizing Fuzzy-Associative Learning. IEEE Transactions on Neural Networks, 2010, 21, 985-1003.	4.2	33
44	POP-Yager: A novel self-organizing fuzzy neural network based on the Yager inference. Expert Systems With Applications, 2005, 29, 229-242.	7.6	31
45	Towards dynamic fuzzy rule interpolation. , 2013, , .		31
46	GSETSK: a generic self-evolving TSK fuzzy neural network with a novel Hebbian-based rule reduction approach. Applied Soft Computing Journal, 2015, 35, 29-42.	7.2	29
47	A novel self-organizing fuzzy rule-based system for modelling traffic flow behaviour. Expert Systems With Applications, 2009, 36, 12167-12178.	7.6	28
48	ieRSPOP: A novel incremental rough set-based pseudo outer-product with ensemble learning. Applied Soft Computing Journal, 2016, 46, 170-186.	7.2	26
49	Rainfall-runoff modelling using a self-reliant fuzzy inference network with flexible structure. Journal of Hydrology, 2018, 564, 1179-1193.	5.4	26
50	Structure and learning algorithms of a nonsingleton input fuzzy neural network based on the approximate analogical reasoning schema. Fuzzy Sets and Systems, 2006, 157, 1814-1831.	2.7	24
51	A novel recurrent neural network-based prediction system for option trading and hedging. Applied Intelligence, 2008, 29, 138-151.	5.3	24
52	HebbR2-Taffic: A novel application of neuro-fuzzy network for visual based traffic monitoring system. Expert Systems With Applications, 2009, 36, 6343-6356.	7.6	24
53	Improved MCMAC with momentum, neighborhood, and averaged trapezoidal output. IEEE Transactions on Systems, Man, and Cybernetics, 2000, 30, 491-500.	5.0	23
54	Hierarchically Clustered Adaptive Quantization CMAC and Its Learning Convergence. IEEE Transactions on Neural Networks, 2007, 18, 1658-1682.	4.2	23

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55	RLDDE: A novel reinforcement learning-based dimension and delay estimator for neural networks in time series prediction. Neurocomputing, 2007, 70, 1331-1341.	5.9	23
56	MuSCoWERT: multi-scale consistence of weighted edge Radon transform for horizon detection in maritime images. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2016, 33, 2491.	1.5	23
57	Maximizing winning trades using a novel RSPOP fuzzy neural network intelligent stock trading system. Applied Intelligence, 2008, 29, 116-128.	5.3	21
58	PSECMAC: A Novel Self-Organizing Multiresolution Associative Memory Architecture. IEEE Transactions on Neural Networks, 2008, 19, 689-712.	4.2	21
59	GenSoFNN-Yager: A novel brain-inspired generic self-organizing neuro-fuzzy system realizing Yager inference. Expert Systems With Applications, 2008, 35, 1825-1840.	7.6	20
60	R-POPTVR: A Novel Reinforcement-Based POPTVR Fuzzy Neural Network for Pattern Classification. IEEE Transactions on Neural Networks, 2009, 20, 1740-1755.	4.2	20
61	PREDICTING THE IMPACT OF ANTICIPATORY ACTION ON U.S. STOCK MARKET?AN EVENT STUDY USING ANFIS (A NEURAL FUZZY MODEL). Computational Intelligence, 2007, 23, 117-141.	3.2	19
62	A novel neuro-cognitive approach to modeling traffic control and flow based on fuzzy neural techniques. Expert Systems With Applications, 2009, 36, 4788-4803.	7.6	19
63	A parameter independent line fitting method. , 2011, , .		19
64	MSCM-LiFe: Multi-scale cross modal linear feature for horizon detection in maritime images. , 2016, , .		19
65	Sentiment analysis using EEG activities for suicidology. Expert Systems With Applications, 2018, 103, 206-217.	7.6	19
66	Maximum reward reinforcement learning: A non-cumulative reward criterion. Expert Systems With Applications, 2006, 31, 351-359.	7.6	18
67	An iterative cross-subject negative-unlabeled learning algorithm for quantifying passive fatigue. Journal of Neural Engineering, 2019, 16, 056013.	3.5	18
68	Reinforcement learning combined with a fuzzy adaptive learning control network (FALCON-R) for pattern classification. Pattern Recognition, 2005, 38, 513-526.	8.1	17
69	DCT-Yager FNN: A Novel Yager-Based Fuzzy Neural Network With the Discrete Clustering Technique. IEEE Transactions on Neural Networks, 2008, 19, 625-644.	4.2	17
70	A synergy of econometrics and computational methods (GARCH-RNFS) for volatility forecasting. , 2010, , .		17
71	Robust EEG channel selection across sessions in brain-computer interface involving stroke patients. , 2012, , .		17
72	A novel brain-inspired neural cognitive approach to SARS thermal image analysis. Expert Systems With Applications, 2010, 37, 3040-3054.	7.6	16

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73	ARPOP: An Appetitive Reward-Based Pseudo-Outer-Product Neural Fuzzy Inference System Inspired From the Operant Conditioning of Feeding Behavior in Aplysia. IEEE Transactions on Neural Networks and Learning Systems, 2012, 23, 317-329.	11.3	15
74	Are Object Detection Assessment Criteria Ready for Maritime Computer Vision?. IEEE Transactions on Intelligent Transportation Systems, 2020, 21, 5295-5304.	8.0	15
75	Dynamic portfolio rebalancing through reinforcement learning. Neural Computing and Applications, 2022, 34, 7125-7139.	5.6	15
76	Mutual information-based optimization of sparse spatio-spectral filters in brain–computer interface. Neural Computing and Applications, 2014, 25, 625-634.	5.6	14
77	Ovarian cancer diagnosis using a hybrid intelligent system with simple yet convincing rules. Applied Soft Computing Journal, 2014, 20, 25-39.	7.2	14
78	Omitting the intra-session calibration in EEG-based brain computer interface used for stroke rehabilitation. , 2012, 2012, 4124-7.		13
79	Backward fuzzy rule interpolation with multiple missing values. , 2013, , .		13
80	DCBAM: A discrete chainable bidirectional associative memory. Pattern Recognition Letters, 1996, 17, 985-999.	4.2	12
81	A nature inspired Ying–Yang approach for intelligent decision support in bank solvency analysis. Expert Systems With Applications, 2008, 34, 2576-2587.	7.6	12
82	Stock price prediction using Generic Self-Evolving Takagi-Sugeno-Kang (GSETSK) fuzzy neural network. , 2010, , .		12
83	An interpretable neural fuzzy inference system for predictions of underpricing in initial public offerings. Neurocomputing, 2018, 319, 102-117.	5.9	12
84	EpiList: An Intelligent Tutoring System Shell for Implicit Development of Generic Cognitive Skills That Support Bottom-Up Knowledge Construction. IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans, 2007, 37, 58-71.	2.9	11
85	A Novel Biologically and Psychologically Inspired Fuzzy Decision Support System: Hierarchical Complementary Learning. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2008, 5, 67-79.	3.0	11
86	Fuzzy Associative Conjuncted Maps Network. IEEE Transactions on Neural Networks, 2009, 20, 1302-1319.	4.2	11
87	An analysis on driver drowsiness based on reaction time and EEG band power. , 2015, 2015, 7982-5.		11
88	Rough set-based neuro-fuzzy system. , 2006, , .		10
89	RFCMAC: A novel reduced localized neuro-fuzzy system approach to knowledge extraction. Expert Systems With Applications, 2011, 38, 12066-12084.	7.6	10
90	Type-2 GA-TSK fuzzy neural network. , 2007, , .		9

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91	DEB: Definite Error Bounded Tangent Estimator for Digital Curves. IEEE Transactions on Image Processing, 2014, 23, 4297-4310.	9.8	9
92	Bank failure prediction using an accurate and interpretable neural fuzzy inference system. AI Communications, 2016, 29, 477-495.	1.2	9
93	Correlation of reaction time and EEG log bandpower from dry frontal electrodes in a passive fatigue driving simulation experiment. , 2017, 2017, 2482-2485.		9
94	The applicability of Generic Self-Evolving Takagi-Sugeno-Kang neuro-fuzzy model in modeling rainfallâ€"runoff and river routing. Hydrology Research, 2019, 50, 991-1001.	2.7	9
95	IT2-GSETSK: An evolving interval Type-II TSK fuzzy neural system for online modeling of noisy data. Neurocomputing, 2020, 407, 1-11.	5.9	9
96	Scale and move transformation-based fuzzy rule interpolation with interval type-2 fuzzy sets. , 2013, , .		8
97	Motivation detection using EEG signal analysis by residual-in-residual convolutional neural network. Expert Systems With Applications, 2021, 184, 115548.	7.6	8
98	A foreign exchange portfolio management mechanism based on fuzzy neural networks. , 2007, , .		7
99	Adaptive control of infusion pump for Type-I diabetes control using a self-tuning regulator. , 2008, , .		7
100	EpiList II: Closing the Loop in the Development of Generic Cognitive Skills. IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans, 2010, 40, 676-685.	2.9	7
101	Neural network modelling of the influence of channelopathies on reflex visual attention. Cognitive Neurodynamics, 2016, 10, 49-72.	4.0	7
102	End-to-End Hierarchical Reinforcement Learning With Integrated Subgoal Discovery. IEEE Transactions on Neural Networks and Learning Systems, 2022, 33, 7778-7790.	11.3	7
103	Neural network model for time series prediction by reinforcement learning. , 0, , .		6
104	FCMAC-AARS: A Novel FNN Architecture for Stock Market Prediction and Trading. , 0, , .		6
105	MNFS-FPM: A novel memetic neuro-fuzzy system based financial portfolio management. , 2007, , .		6
106	Dynamic screening of autistic children in various mental states using pattern of connectivity between brain regions. Applied Soft Computing Journal, 2015, 32, 335-346.	7.2	6
107	Enhancing Decision Support System with Neural Fuzzy Model and Simple Model Visualizations. Intelligent Systems Reference Library, 2010, , 85-116.	1.2	5
108	CMAC with Fuzzy Logic Reasoning. Lecture Notes in Computer Science, 2004, , 898-903.	1.3	4

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109	Optimally Evolving Irregular-Shaped Membership Functions for Fuzzy Systems. , 0, , .		4
110	A Brain Inspired Fuzzy Neuro-predictor for Bank Failure Analysis. , 0, , .		4
111	ACPOP: Ambiguity correction-based pseudo-outer-product fuzzy rule identification algorithm. , 2009, , .		4
112	Multi-frequency band common spatial pattern with sparse optimization in Brain-Computer Interface. , 2012, , .		4
113	RS-HeRR: a rough set-based Hebbian rule reduction neuro-fuzzy system. Neural Computing and Applications, 2021, 33, 1123-1137.	5.6	4
114	An Evolving Type-2 Neural Fuzzy Inference System. Lecture Notes in Computer Science, 2010, , 535-546.	1.3	4
115	A hybrid approach for breast tissue data classification. , 2009, , .		3
116	A Precise Ellipse Fitting Method for Noisy Data. Lecture Notes in Computer Science, 2012, , 253-260.	1.3	3
117	Fuzzy interpolation and extrapolation using shift ratio and overall weight measurement based on areas of fuzzy sets. , 2013, , .		3
118	A Deep Hybrid Fuzzy Neural Hammerstein-Wiener Network for Stock Price Prediction. , 2020, , .		3
119	A Novel Fuzzy Associative Memory Architecture for Stock Market Prediction and Trading. International Journal of Fuzzy System Applications, 2011, 1, 61-78.	0.7	3
120	<title>POP-Yager: a novel self-organizing fuzzy neural network based on the Yager inference</title>. , 2000, , .		2
121	<title>ASE-CMAC for speech enhancement in a vehicular environment</title>. , 2000, , .		2
122	Application of a hierarchical coevolutionary fuzzy system for financial prediction and trading. , 2008, , .		2
123	A memory-based reinforcement learning algorithm for partially observable Markovian decision processes. , 2008, , .		2
124	An evolving Mamdani-Takagi-Sugeno based neural-fuzzy inference system with improved interpretability-accuracy. , 2010, , .		2
125	Evolving ensemble of fuzzy models. , 2011, , .		2
126	Traffic prediction using a Generic Self-Evolving Takagi-Sugeno-Kang (GSETSK) fuzzy neural network. , 2012, , .		2

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127	Trading model: Self reorganizing Fuzzy Associative Machine - forecasted MACD-Histogram (SeroFAM-fMACDH). , 2015, , .		2
128	Digital Modulation Classification using Fuzzy Neural Networks. Studies in Computational Intelligence, 2006, , 101-116.	0.9	2
129	HyFIS-Yager-gDIC: A Self-organizing Hybrid Neural Fuzzy Inference System Realizing Yager Inference. Lecture Notes in Computer Science, 2009, , 1137-1145.	1.3	2
130	A Modified Generalized RBF Model with EM-based Learning Algorithm for Medical Applications. , 2006, , .		1
131	HiCEFS — A hierarchical coevolutionary approach for the dynamic generation of fuzzy system. , 2007, , .		1
132	Speech emotion recognition using auditory cortex. , 2007, , .		1
133	Brain-Inspired Evolving Neuro-Fuzzy System for Financial Forecasting and Trading of the S&P500 Index. Lecture Notes in Computer Science, 2010, , 601-607.	1.3	1
134	FAPOP: Feature analysis enhanced pseudo outer-product fuzzy rule identification system. , 2011, , .		1
135	Self-reorganizing TSK fuzzy inference system with BCM theory of meta-plasticity. , 2012, , .		1
136	Traffic modeling and identification using a Self-adaptive Fuzzy Inference Network. , 2012, , .		1
137	FIE-FCMAC: A novel fuzzy cerebellum model articulation controller (FCMAC) using fuzzy interpolation and extrapolation technique. , 2015, , .		1
138	A Decision Making System Based on Complementary Learning. Intelligent Systems Reference Library, 2010, , 163-179.	1.2	1
139	Reinforcement Based U-Tree: A Novel Approach for Solving POMDP. Intelligent Systems Reference Library, 2010, , 205-232.	1.2	1
140	A Non-heuristic Dominant Point Detection Based on Suppression of Break Points. Lecture Notes in Computer Science, 2012, , 269-276.	1.3	1
141	Rainfall-runoff Modelling in a Semi-urbanized Catchment using Self-adaptive Fuzzy Inference Network. , 2018, , .		1
142	Who are the â€˜silent spreadersâ€™?: contact tracing in spatio-temporal memory models. Neural Computing and Applications, 0, , .	5.6	1
143	Feature extraction for neural-fuzzy inference system. , 0, , .		0
144	A Novel Recurrent Neural Network Based Prediction System for Trading. , 0, , .		0

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145	Rough set-based neuro-fuzzy system. , 0, , .		0
146	Learning associations of conjuncted fuzzy sets for data prediction. , 2008, , .		0
147	Learning from an ensemble of Receptive Fields. , 2009, , .		0
148	A hypothalamic and piagetian fuzzy inference system: HtPFIS. , 2009, , .		0
149	RSFCMAC: A novel rough set&#x2013;based rule reduction approach for fuzzy CMAC architecture with yager-inference-scheme. , 2009, , .		0
150	Time series forecasting with appetitive reward-based pseudo-outer-product fuzzy neural network. , 2010, , .		0
151	Fuzzy associative learning of feature dependency for time series forecasting. , 2012, , .		0
152	Comparison of error bounds for non-parametric dominant point detection. , 2013, , .		0
153	Leveraging the trade-off between accuracy and interpretability in a hybrid intelligent system. , 2017, , .		0
154	seMLP: Self-evolving Multi-layer Perceptron in Stock Trading Decision Making. SN Computer Science, 2021, 2, 1.	3.6	0
155	Online Self-reorganizing Neuro-fuzzy Reasoning in Interval-Forecasting for Financial Time-Series. Lecture Notes in Computer Science, 2010, , 523-534.	1.3	0
156	A Novel Fuzzy Associative Memory Architecture for Stock Market Prediction and Trading. , 2013, , 87-104.		0
157	Financial Market Trading System With a Hierarchical Coevolutionary Fuzzy Predictive Model. IEEE Transactions on Evolutionary Computation, 2009, , .	10.0	0