Kai Keng Ang

List of Publications by Year
in descending order

162 papers	6,931 citations	136740 32 h-index	138251 58 g-index
163 all docs	163 docs citations	163 times ranked	4674 citing authors

#	Article	IF	Citations
1	Filter Bank Common Spatial Pattern Algorithm on BCI Competition IV Datasets 2a and 2b. Frontiers in Neuroscience, 2012, 6, 39.	1.4	790
2	A Randomized Controlled Trial of EEG-Based Motor Imagery Brain-Computer Interface Robotic Rehabilitation for Stroke. Clinical EEG and Neuroscience, 2015, 46, 310-320.	0.9	389
3	Optimizing the Channel Selection and Classification Accuracy in EEG-Based BCI. IEEE Transactions on Biomedical Engineering, 2011, 58, 1865-1873.	2.5	333
4	Filter Bank Common Spatial Pattern (FBCSP) in Brain-Computer Interface. , 2008, , .		304
5	A Large Clinical Study on the Ability of Stroke Patients to Use an EEG-Based Motor Imagery Brain-Computer Interface. Clinical EEG and Neuroscience, 2011, 42, 253-258.	0.9	289
6	Brain-computer interface-based robotic end effector system for wrist and hand rehabilitation: results of a three-armed randomized controlled trial for chronic stroke. Frontiers in Neuroengineering, 2014, 7, 30.	4.8	252
7	A New Discriminative Common Spatial Pattern Method for Motor Imagery Brainâ€"Computer Interfaces. IEEE Transactions on Biomedical Engineering, 2009, 56, 2730-2733.	2.5	251
8	Resting State Changes in Functional Connectivity Correlate With Movement Recovery for BCI and Robot-Assisted Upper-Extremity Training After Stroke. Neurorehabilitation and Neural Repair, 2013, 27, 53-62.	1.4	215
9	EEG-Based Strategies to Detect Motor Imagery for Control and Rehabilitation. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2017, 25, 392-401.	2.7	177
10	Brain-Computer Interface in Stroke Rehabilitation. Journal of Computing Science and Engineering, 2013, 7, 139-146.	0.3	168
11	Mutual information-based selection of optimal spatialâ€"temporal patterns for single-trial EEG-based BCIs. Pattern Recognition, 2012, 45, 2137-2144.	5.1	165
12	Inter-subject transfer learning with an end-to-end deep convolutional neural network for EEG-based BCI. Journal of Neural Engineering, 2019, 16, 026007.	1.8	153
13	Facilitating Effects of Transcranial Direct Current Stimulation on Motor Imagery Brain-Computer Interface With Robotic Feedback for Stroke Rehabilitation. Archives of Physical Medicine and Rehabilitation, 2015, 96, S79-S87.	0.5	118
14	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.	7.2	112
15	Assessment of the Efficacy of EEG-Based MI-BCI With Visual Feedback and EEG Correlates of Mental Fatigue for Upper-Limb Stroke Rehabilitation. IEEE Transactions on Biomedical Engineering, 2020, 67, 786-795.	2.5	112
16	Weighted Transfer Learning for Improving Motor Imagery-Based Brainâ€"Computer Interface. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2019, 27, 1352-1359.	2.7	108
17	Stock Trading Using RSPOP: A Novel Rough Set-Based Neuro-Fuzzy Approach. IEEE Transactions on Neural Networks, 2006, 17, 1301-1315.	4.8	105
18	Brainâ€"Computer Interface for Neurorehabilitation of Upper Limb After Stroke. Proceedings of the IEEE, 2015, 103, 944-953.	16.4	101

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19	RSPOP: Rough Setâ€"Based Pseudo Outer-Product Fuzzy Rule Identification Algorithm. Neural Computation, 2005, 17, 205-243.	1.3	99
20	EEG-Based Classification of Fast and Slow Hand Movements Using Wavelet-CSP Algorithm. IEEE Transactions on Biomedical Engineering, 2013, 60, 2123-2132.	2.5	99
21	Clinical study of neurorehabilitation in stroke using EEG-based motor imagery brain-computer interface with robotic feedback. , 2010, 2010, 5549-52.		97
22	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.	5.5	92
23	Generative Adversarial Networks-Based Data Augmentation for Brainâ€"Computer Interface. IEEE Transactions on Neural Networks and Learning Systems, 2021, 32, 4039-4051.	7.2	85
24	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.	7.2	82
25	EEG-based Emotion Recognition Using Self-Organizing Map for Boundary Detection. , 2010, , .		80
26	EEG Data Space Adaptation to Reduce Intersession Nonstationarity in Brain-Computer Interface. Neural Computation, 2013, 25, 2146-2171.	1.3	74
27	Brain-Computer Interface-Based Soft Robotic Glove Rehabilitation for Stroke. IEEE Transactions on Biomedical Engineering, 2020, 67, 3339-3351.	2.5	74
28	A clinical study of motor imagery-based brain-computer interface for upper limb robotic rehabilitation. , 2009, 2009, 5981-4.		69
29	A Brain-Computer Interface for classifying EEG correlates of chronic mental stress. , 2011, , .		69
30	On the use of convolutional neural networks and augmented CSP features for multi-class motor imagery of EEG signals classification. , 2015, 2015, 2620-3.		66
31	Learning EEG-based spectral-spatial patterns for attention level measurement. , 2009, , .		65
32	Optimum Spatio-Spectral Filtering Network for Brainâ€"Computer Interface. IEEE Transactions on Neural Networks, 2011, 22, 52-63.	4.8	65
33	Asymmetric Spatial Pattern for EEG-based emotion detection. , 2012, , .		62
34	Prognostic and Monitory EEG-Biomarkers for BCI Upper-Limb Stroke Rehabilitation. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2019, 27, 1654-1664.	2.7	58
35	Dynamically weighted ensemble classification for non-stationary EEG processing. Journal of Neural Engineering, 2013, 10, 036007.	1.8	56
36	Multi-class EEG classification of voluntary hand movement directions. Journal of Neural Engineering, 2013, 10, 056018.	1.8	55

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37	Brain plasticity following MI-BCI training combined with tDCS in a randomized trial in chronic subcortical stroke subjects: a preliminary study. Scientific Reports, 2017, 7, 9222.	1.6	51
38	Comparison of designs towards a subject-independent brain-computer interface based on motor imagery. , 2009, 2009, 4543-6.		46
39	Multi-class filter bank common spatial pattern for four-class motor imagery BCI. , 2009, 2009, 571-4.		46
40	Facilitating motor imagery-based brain–computer interface for stroke patients using passive movement. Neural Computing and Applications, 2017, 28, 3259-3272.	3.2	41
41	The predictive role of pre-cue EEG rhythms on MI-based BCI classification performance. Journal of Neuroscience Methods, 2014, 235, 138-144.	1.3	40
42	A subject-independent pattern-based Brain-Computer Interface. Frontiers in Behavioral Neuroscience, 2015, 9, 269.	1.0	39
43	Transcranial direct current stimulation and EEG-based motor imagery BCI for upper limb stroke rehabilitation. , 2012, 2012, 4128-31.		36
44	A feasibility study of non-invasive motor-imagery BCI-based robotic rehabilitation for Stroke patients. , 2009, , .		32
45	Independent Mobility Achieved through a Wireless Brain-Machine Interface. PLoS ONE, 2016, 11, e0165773.	1.1	30
46	Discriminative Ocular Artifact Correction for Feature Learning in EEG Analysis. IEEE Transactions on Biomedical Engineering, 2017, 64, 1906-1913.	2.5	30
47	MCMAC–CVT: a novel on-line associative memory based CVT transmission control system. Neural Networks, 2002, 15, 219-236.	3.3	28
48	Towards EEG Generation Using GANs for BCI Applications. , 2019, , .		28
49	Detection of motor imagery of swallow EEG signals based on the dual-tree complex wavelet transform and adaptive model selection. Journal of Neural Engineering, 2014, 11, 035016.	1.8	27
50	Adaptive tracking of discriminative frequency components in electroencephalograms for a robust brain–computer interface. Journal of Neural Engineering, 2011, 8, 036007.	1.8	26
51	Motor imagery BCI for upper limb stroke rehabilitation: An evaluation of the EEG recordings using coherence analysis. , 2013, 2013, 261-4.		26
52	ieRSPOP: A novel incremental rough set-based pseudo outer-product with ensemble learning. Applied Soft Computing Journal, 2016, 46, 170-186.	4.1	26
53	Wavelet phase-locking based binary classification of hand movement directions from EEG. Journal of Neural Engineering, 2018, 15, 066008.	1.8	25
54	Improved MCMAC with momentum, neighborhood, and averaged trapezoidal output. IEEE Transactions on Systems, Man, and Cybernetics, 2000, 30, 491-500.	5.5	23

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55	Learning discriminative patterns for self-paced EEG-based motor imagery detection. Frontiers in Neuroscience, 2012, 6, 7.	1.4	23
56	Affective computation on EEG correlates of emotion from musical and vocal stimuli. , 2009, , .		21
57	Spatially sparsed Common Spatial Pattern to improve BCI performance. , 2011, , .		21
58	Common frequency pattern for music preference identification using frontal EEG. , 2013, , .		21
59	Using Transcranial Direct Current Stimulation to Augment the Effect of Motor Imagery-Assisted Brain-Computer Interface Training in Chronic Stroke Patientsâ€"Cortical Reorganization Considerations. Frontiers in Neurology, 2020, 11, 948.	1.1	21
60	A Wavelet-CSP method to classify hand movement directions in EEG based BCI system. , 2011, , .		20
61	Efficacy of Brainâ€"Computer Interface and the Impact of Its Design Characteristics on Poststroke Upper-limb Rehabilitation: A Systematic Review and Meta-analysis of Randomized Controlled Trials. Clinical EEG and Neuroscience, 2022, 53, 79-90.	0.9	20
62	Task-related brain functional network reconfigurations relate to motor recovery in chronic subcortical stroke. Scientific Reports, 2021, 11, 8442.	1.6	19
63	A clinical evaluation of non-invasive motor imagery-based brain-computer interface in stroke. , 2008, 2008, 4178-81.		18
64	Filter Bank Common Spatial Pattern (FBCSP) algorithm using online adaptive and semi-supervised learning. , 2011, , .		18
65	An iterative cross-subject negative-unlabeled learning algorithm for quantifying passive fatigue. Journal of Neural Engineering, 2019, 16, 056013.	1.8	18
66	Multiclass voluntary facial expression classification based on Filter Bank Common Spatial Pattern. , 2008, 2008, 1005-8.		17
67	A synergy of econometrics and computational methods (GARCH-RNFS) for volatility forecasting. , 2010, , .		17
68	Robust EEG channel selection across sessions in brain-computer interface involving stroke patients. , 2012, , .		17
69	Adaptation of motor imagery EEG classification model based on tensor decomposition. Journal of Neural Engineering, 2014, 11, 056020.	1.8	17
70	Neural and cortical analysis of swallowing and detection of motor imagery of swallow for dysphagia rehabilitationâ€"A review. Progress in Brain Research, 2016, 228, 185-219.	0.9	17
71	EEG-based discrimination of different cognitive workload levels from mental arithmetic. , 2018, 2018, 1984-1987.		17
72	Online semi-supervised learning with KL distance weighting for Motor Imagery-based BCI. , 2012, 2012, 2732-5.		16

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73	Brain Functional Changes in Stroke Following Rehabilitation Using Brain-Computer Interface-Assisted Motor Imagery With and Without tDCS: A Pilot Study. Frontiers in Human Neuroscience, 2021, 15, 692304.	1.0	16
74	Quantitative EEG as Biomarkers for the Monitoring of Post-Stroke Motor Recovery in BCI and tDCS Rehabilitation. , 2018, 2018, 3610-3613.		15
75	A clinical evaluation on the spatial patterns of non-invasive motor imagery-based brain-computer interface in stroke. , 2008, 2008, 4174-7.		14
76	Maximum dependency and minimum redundancy-based channel selection for motor imagery of walking EEG signal detection. , 2013, , .		14
77	Mutual information-based optimization of sparse spatio-spectral filters in brain–computer interface. Neural Computing and Applications, 2014, 25, 625-634.	3.2	14
78	A Unified Fisher's Ratio Learning Method for Spatial Filter Optimization. IEEE Transactions on Neural Networks and Learning Systems, 2017, 28, 2727-2737.	7.2	14
79	Prefrontal cortical activation while viewing urban and garden scenes: A pilot fNIRS study. , 2017, 2017, 2546-2549.		14
80	A Brain-Computer Interface for Mental Arithmetic Task from Single-Trial Near-Infrared Spectroscopy Brain Signals. , 2010, , .		13
81	Omitting the intra-session calibration in EEG-based brain computer interface used for stroke rehabilitation. , 2012, 2012, 4124-7.		13
82	A multimodal fNIRS and EEG-based BCI study on motor imagery and passive movement. , 2013, , .		13
83	Detection of motor imagery of brisk walking from electroencephalogram. Journal of Neuroscience Methods, 2015, 244, 33-44.	1.3	13
84	Fast emotion detection from EEG using asymmetric spatial filtering. , 2012, , .		12
85	A Subject-to-subject Transfer Learning Framework Based on Jensen-Shannon Divergence for Improving Brain-computer Interface. , 2019, , .		12
86	Robust filter bank common spatial pattern (RFBCSP) in motor-imagery-based brain-computer interface. , 2009, 2009, 578-81.		11
87	Online performance evaluation of motor imagery BCI with augmented-reality virtual hand feedback. , 2010, 2010, 3341-4.		11
88	Dynamic initiation and dual-tree complex wavelet feature-based classification of motor imagery of swallow EEG signals. , 2012, , .		11
89	Discriminative Learning of Propagation and Spatial Pattern for Motor Imagery EEG Analysis. Neural Computation, 2013, 25, 2709-2733.	1.3	11
90	Improving session-to-session transfer performance of motor imagery-based BCI using adaptive extreme learning machine. , 2013, 2013, 2188-91.		11

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91	An analysis on driver drowsiness based on reaction time and EEG band power. , 2015, 2015, 7982-5.		11
92	Rough set-based neuro-fuzzy system. , 2006, , .		10
93	Extracting and selecting discriminative features from high density NIRS-based BCI for numerical cognition. , 2012, , .		10
94	A modified Wavelet-Common Spatial Pattern method for decoding hand movement directions in brain computer interfaces. , 2012, , .		10
95	Extracting effective features from high density nirs-based BCI for assessing numerical cognition. , 2012, , .		9
96	Correlation of reaction time and EEG log bandpower from dry frontal electrodes in a passive fatigue driving simulation experiment. , 2017, 2017, 2482-2485.		9
97	Personalized features for attention detection in children with Attention Deficit Hyperactivity Disorder. , 2017, 2017, 414-417.		9
98	Modeling EEG-based Motor Imagery with Session to Session Online Adaptation. , 2018, 2018, 1988-1991.		9
99	Image-based Motor Imagery EEG Classification using Convolutional Neural Network. , 2019, , .		9
100	Investigating different stress-relief methods using Electroencephalogram (EEG). , 2020, 2020, 2999-3002.		9
101	Stock Trading using PSEC and RSPOP: A novel evolving rough set-based neuro-fuzzy approach. , 0, , .		8
102	Calibrating EEG-based motor imagery brain-computer interface from passive movement. , 2011, 2011, 4199-202.		8
103	Supervised Pseudo Self-Evolving Cerebellar algorithm for generating fuzzy membership functions. Expert Systems With Applications, 2012, 39, 2279-2287.	4.4	8
104	Towards improvement of MI-BCI performance of subjects with BCI deficiency. , 2015, , .		8
105	Binary classification of hand movement directions from EEG using wavelet phase-locking. , 2017, , .		8
106	Digital Signal Processing and Machine Learning. The Frontiers Collection, 2009, , 305-330.	0.1	7
107	Classification of self-paced finger movements with EEG signals using neural network and evolutionary approaches. , 2009, , .		6
108	Application of rough set-based neuro-fuzzy system in NIRS-based BCI for assessing numerical cognition in classroom. , 2010, , .		6

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109	Dynamic screening of autistic children in various mental states using pattern of connectivity between brain regions. Applied Soft Computing Journal, 2015, 32, 335-346.	4.1	6
110	Mindfulness and hemodynamics in asians: a literature review. Asian Journal of Psychiatry, 2019, 44, 112-118.	0.9	6
111	Augmenting cognitive processes in robot-assisted motor rehabilitation. , 2008, , .		5
112	Navigation in a virtual environment using multiclass motor imagery Brain-Computer Interface. , 2013, , .		5
113	Neural representations of movement intentions during brain-controlled self-motion. , 2015, , .		5
114	Differential Amplitude of Low-Frequency Fluctuations in brain networks after BCI Training with and without tDCS in Stroke. , 2018, 2018, 1050-1053.		5
115	Cluster impurity and forward-backward error maximization-based active learning for EEG signals classification. , 2012, , .		4
116	Multi-frequency band common spatial pattern with sparse optimization in Brain-Computer Interface. , 2012, , .		4
117	A clinical study of motor imagery BCI performance in stroke by including calibration data from passive movement. , 2013, 2013, 6603-6.		4
118	Automatic selection of neuronal spike detection threshold via smoothed Teager energy histogram. , 2013, , .		4
119	On the asynchronously continuous control of mobile robot movement by motor cortical spiking activity. , 2014, 2014, 3049-52.		4
120	Discriminative channel addition and reduction for filter bank common spatial pattern in motor imagery BCI. , 2014, 2014, 1310-3.		4
121	Boosting performance in brain-machine interface by classifier-level fusion based on accumulative training models from multi-day data. , 2017, 2017, 1922-1925.		4
122	Spatio-spectral feature selection based on robust mutual information estimate for brain computer interfaces. , 2009, 2009, 4978-81.		3
123	EEG signal separation for multi-class motor imagery using common spatial patterns based on Joint Approximate Diagonalization. , 2010, , .		3
124	A novel hand strength assessment method integrated into haptic knob for stroke rehabilitation. , 2013, , .		3
125	Optimizing low-frequency common spatial pattern features for multi-class classification of hand movement directions. , 2013, 2013, 2780-3.		3
126	Single-trial classification of NIRS data from prefrontal cortex during working memory tasks. , 2014, 2014, 2008-11.		3

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127	Selection of effective EEG channels in brain computer interfaces based on inconsistencies of classifiers. , 2014, 2014, 672-5.		3
128	Stationary Transfer Component Analysis for Brain Computer Interfacing. , 2012, , .		3
129	A Transfer Learning Algorithm to Reduce Brain-Computer Interface Calibration Time for Long-Term Users. Frontiers in Neuroergonomics, 2022, 3, .	0.6	3
130	An Information Theoretic Linear Discriminant Analysis Method. , 2010, , .		2
131	Filter Bank Feature Combination (FBFC) approach for brain-computer interface. , 2011, , .		2
132	Dynamically Weighted Classification with Clustering to tackle non-stationarity in Brain computer Interfacing. , 2012, , .		2
133	Seizure detection based on spatiotemporal correlation and frequency regularity of scalp EEG. , 2012, , .		2
134	Feature consistency-based model adaptation in session-to-session classification: A study using motor imagery of swallow EEG signals. , 2013, 2013, 429-32.		2
135	Connectivity pattern modeling of motor imagery EEG. , 2013, , .		2
136	Quality assessment of EEG signals based on statistics of signal fluctuations. , 2014, , .		2
137	Determining mechanical and electromyographical reaction time in a BCI driving fatigue experiment. , 2015, , .		2
138	Rapid Detection of Inactive Channels during Multi-unit Intracranial Recordings. , 2019, , .		2
139	Real coded GA-based SVM for motor imagery classification in a Brain-Computer Interface. , 2011, , .		1
140	Composite Filter Bank Common Spatial Pattern for motor imagery-based Brain-Computer Interface. , 2011, , .		1
141	Cortical activation of passive hand movement using Haptic Knob: A preliminary multi-channel fNIRS study. , 2014, 2014, 2097-100.		1
142	Spatial filter adaptation based on geodesic-distance for motor EEG classification. , 2014, , .		1
143	A measurement of motor recovery for motor imagery-based BCI using EEG coherence analysis. , 2015, , .		1
144	Combining firing rate and spike-train synchrony features in the decoding of motor cortical activity. , 2015, 2015, 1091-4.		1

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145	Motor cortical adaptation induced by closed-loop BCI. , 2015, , .		1
146	Adaptive decoding using local field potentials in a brain-machine interface. , 2016, 2016, 5721-5724.		1
147	Reject option to reduce false prediction rates for EEG-motor imagery based BCI. , 2017, 2017, 2964-2967.		1
148	Stop state classification in intracortical brain-machine-interface. , 2017, 2017, 1926-1929.		1
149	Robust Local Field Potential-based Neural Decoding by Actively Selecting Discriminative Channels. , 2018, 2018, 1992-1995.		1
150	Weighted Transfer Learning of Dynamic Time Warped Data for Motor Imagery based Brain Computer Interfaces. , 2020, 2020, 2977-2980.		1
151	Brain-Computer Interface for Stroke Rehabilitation. , 2021, , 1-31.		1
152	MLVQ. , 0, , 485-509.		1
153	Rough set-based neuro-fuzzy system. , 0, , .		0
154	Prefrontal cortical activation during arithmetic processing differentiated by cultures: A preliminary fNIRS study. , 2012, 2012, 4716-9.		0
155	Neural decoding of movement targets by unsorted spike trains. , 2013, , .		0
156	A forearm pronation/supination assessment method integrated into Haptic Knob for stroke rehabilitation. , 2013, , .		0
157	Spatial filter design based on re-estimated projection matrices. , 2013, , .		0
158	Neural representation and identification of reaching targets by spike trains in motor cortex. , 2013, , .		0
159	Spatial filter adaptation based on the divergence framework for motor imagery EEG classification. , 2014, 2014, 1847-50.		0
160	Brain-computer interface for neurorehabilitation: Looking beyond upper limbs. , 2014, , .		0
161	Spatial filter subspace optimization based on mutual information. , 2015, , .		0
162	Rough Set-Based Neuro-Fuzzy System. , 2009, , 1396-1403.		0