Ricardo Chavarriaga

List of Publications by Year
in descending order

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132 papers	4,383 citations	172207 29 h-index	155451 55 g-index
141 all docs	141 docs citations	141 times ranked	3510 citing authors

#	Article	IF	Citations
1	EEG-Based Online Regulation of Difficulty in Simulated Flying. IEEE Transactions on Affective Computing, 2023, 14, 394-405.	5.7	3
2	Workshops of the eighth international brainâ€“computer interface meeting: BCIs: the next frontier. Brain-Computer Interfaces, 2022, 9, 69-101.	0.9	4
3	International data governance for neuroscience. Neuron, 2022, 110, 600-612.	3.8	28
4	Context-Aware Learning for Generative Models. IEEE Transactions on Neural Networks and Learning Systems, 2021, 32, 3471-3483.	7.2	4
5	User Adaptation to Closed-Loop Decoding of Motor Imagery Termination. IEEE Transactions on Biomedical Engineering, 2021, 68, 3-10.	2.5	10
6	Tiny noise, big mistakes: adversarial perturbations induce errors in brainâ€“computer interface spellers. National Science Review, 2021, 8, nwaa233.	4.6	37
7	The CLAIRE COVID-19 initiative: approach, experiences and recommendations. Ethics and Information Technology, 2021, 23, 127-133.	2.3	0
8	Closed-loop EEG study on visual recognition during driving. Journal of Neural Engineering, 2021, 18, 026010.	1.8	2
9	EEG Correlates of Difficulty Levels in Dynamical Transitions of Simulated Flying and Mapping Tasks. IEEE Transactions on Human-Machine Systems, 2021, 51, 99-108.	2.5	11
10	Invariability of EEG error-related potentials during continuous feedback protocols elicited by erroneous actions at predicted or unpredicted states. Journal of Neural Engineering, 2021, 18, 046044.	1.8	11
11	Mobile brain/body imaging of landmarkâ€based navigation with highâ€density EEG. European Journal of Neuroscience, 2021, 54, 8256-8282.	1.2	28
12	A Survey of Un-, Weakly-, and Semi-Supervised Learning Methods for Noisy, Missing and Partial Labels in Industrial Vision Applications. , 2021, , .		8
13	Standardization of Neurotechnology for Brain-Machine Interfacing: State of the Art and Recommendations. IEEE Open Journal of Engineering in Medicine and Biology, 2021, 2, 71-73.	1.7	6
14	Two to Trust: AutoML for Safe Modelling and Interpretable Deep Learning for Robustness. Lecture Notes in Computer Science, 2021, , 268-275.	1.0	0
15	Customizing skills for assistive robotic manipulators, an inverse reinforcement learning approach with error-related potentials. Communications Biology, 2021, 4, 1406.	2.0	23
16	Standards for Neurotechnologies and Brain-Machine Interfacing [Standards]. IEEE Systems, Man, and Cybernetics Magazine, 2020, 6, 50-51.	1.2	3
17	General principles of machine learning for brain-computer interfacing. Handbook of Clinical Neurology / Edited By P J Vinken and G W Bruyn, 2020, 168, 311-328.	1.0	10
18	Uncovering EEG Correlates of Covert Attention in Soccer Goalkeepers: Towards Innovative Sport Training Procedures. Scientific Reports, 2020, 10, 1705.	1.6	16

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19	Spatial covariance improves BCI performance for late ERPs components with high temporal variability. Journal of Neural Engineering, 2020, 17, 036030.	1.8	12
20	Inferring subjective preferences on robot trajectories using EEG signals. , 2019, , .		16
21	Workshops of the seventh international brain-computer interface meeting: not getting lost in translation. Brain-Computer Interfaces, 2019, 6, 71-101.	0.9	8
22	Turning negative into positives! Exploiting â€˜negativeâ€™ results in Brainâ€“Machine Interface (BMI) research. Brain-Computer Interfaces, 2019, 6, 178-189.	0.9	9
23	Analysis of EEG Correlates of Perceived Difficulty in Dynamically Changing Flying Tasks. , 2018, , .		4
24	Using Robust Principal Component Analysis to Reduce EEG Intra-Trial Variability. , 2018, 2018, 1956-1959.		6
25	Differential contributions of subthalamic beta rhythms and 1/f broadband activity to motor symptoms in Parkinsonâ€™s disease. Npj Parkinson's Disease, 2018, 4, 32.	2.5	23
26	Interactions of spatial strategies producing generalization gradient and blocking: A computational approach. PLoS Computational Biology, 2018, 14, e1006092.	1.5	16
27	Human EEG reveals distinct neural correlates of power and precision grasping types. NeuroImage, 2018, 181, 635-644.	2.1	47
28	EEG-Based Lower-Limb Movement Onset Decoding: Continuous Classification and Asynchronous Detection. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2018, 26, 1626-1635.	2.7	46
29	Decoding Neural Correlates of Cognitive States to Enhance Driving Experience. IEEE Transactions on Emerging Topics in Computational Intelligence, 2018, 2, 288-297.	3.4	21
30	Workshops of the Sixth International Brainâ€“Computer Interface Meeting: brainâ€“computer interfaces past, present, and future. Brain-Computer Interfaces, 2017, 4, 3-36.	0.9	24
31	Classification of upper limb center-out reaching tasks by means of EEG-based continuous decoding techniques. Journal of NeuroEngineering and Rehabilitation, 2017, 14, 9.	2.4	58
32	Harnessing Prefrontal Cognitive Signals for Brainâ€“Machine Interfaces. Trends in Biotechnology, 2017, 35, 585-597.	4.9	28
33	Long-Term Stable Control of Motor-Imagery BCI by a Locked-In User Through Adaptive Assistance. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2017, 25, 380-391.	2.7	38
34	Heading for new shores! Overcoming pitfalls in BCI design. Brain-Computer Interfaces, 2017, 4, 60-73.	0.9	73
35	Brain-actuated gait trainer with visual and proprioceptive feedback. Journal of Neural Engineering, 2017, 14, 056017.	1.8	23
36	An Approach to a Phase Model for Steady State Visually Evoked Potentials. Biosystems and Biorobotics, 2017, , 1481-1489.	0.2	0

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37	A brain-controlled exoskeleton with cascaded event-related desynchronization classifiers. Robotics and Autonomous Systems, 2017, 90, 15-23.	3.0	107
38	Endogenous Control of Powered Lower-Limb Exoskeleton. Biosystems and Biorobotics, 2017, , 115-119.	0.2	6
39	Inverse solutions for brain-computer interfaces: Effects of regularisation on localisation and classification. , 2017, , .		1
40	Decoding of Self-paced Lower-Limb Movement Intention: A Case Study on the Influence Factors. Frontiers in Human Neuroscience, 2017, 11, 560.	1.0	19
41	Superposition model for Steady State Visually Evoked Potentials. , 2016, , .		4
42	Evaluating decoding performance of upper limb imagined trajectories during center-out reaching tasks. , 2016, , .		5
43	Spatial filters yield stable features for error-related potentials across conditions. , 2016, , .		11
44	Stream fusion for multi-stream automatic speech recognition. International Journal of Speech Technology, 2016, 19, 669-675.	1.4	0
45	Detection of movement related cortical potential: Effects of causal vs. non-causal processing. , 2016, 2016, 5733-5736.		0
46	Adaptive Assistance for Brain-Computer Interfaces by Online Prediction of Command Reliability. IEEE Computational Intelligence Magazine, 2016, 11, 32-39.	3.4	23
47	Action prediction based on anticipatory brain potentials during simulated driving. Journal of Neural Engineering, 2015, 12, 066006.	1.8	42
48	Teaching brain-machine interfaces as an alternative paradigm to neuroprosthetics control. Scientific Reports, 2015, 5, 13893.	1.6	119
49	10. Brain-Machine Symbiosis. , 2015, , 175-197.		0
50	Asynchronous Decoding of Error Potentials during the Monitoring of a Reaching Task. , 2015, , .		13
51	Brain Correlates of Lane Changing Reaction Time in Simulated Driving. , 2015, , .		7
52	Decoding fast-paced error-related potentials in monitoring protocols. , 2015, 2015, 1111-4.		6
53	Detecting intention to grasp during reaching movements from EEG. , 2015, 2015, 1115-8.		20
54	Quantifying Electrode Reliability During Brainâ€“Computer Interface Operation. IEEE Transactions on Biomedical Engineering, 2015, 62, 858-864.	2.5	9

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55	Discriminant brain connectivity patterns of performance monitoring at average and single-trial levels. NeuroImage, 2015, 120, 64-74.	2.1	20
56	Moving Brain-Controlled Devices Outside the Lab: Principles and Applications. Trends in Augmentation of Human Performance, 2015, , 73-94.	0.4	1
57	Quantifying the time for accurate EEG decoding of single value-based decisions. Journal of Neuroscience Methods, 2015, 250, 114-125.	1.3	13
58	Errare machinale est: the use of error-related potentials in brain-machine interfaces. Frontiers in Neuroscience, 2014, 8, 208.	1.4	216
59	Latency correction of event-related potentials between different experimental protocols. Journal of Neural Engineering, 2014, 11, 036005.	1.8	41
60	Prediction of command delivery time for BCI. , 2014, , .		0
61	Multidisciplinary design of suitable assistive technologies for motor disabilities in Colombia. , 2014, , .		6
62	EEG correlates of active visual search during simulated driving: An exploratory study. , 2014, , .		6
63	Application of hybrid BCI and exergames for balance rehabilitation after stroke. , 2014, , .		11
64	Workshops of the Fifth International Brain-Computer Interface Meeting: Defining the Future. Brain-Computer Interfaces, 2014, 1, 27-49.	0.9	35
65	BCI and motion capture technologies for rehabilitation based on videogames. , 2014, , .		9
66	Single trial prediction of self-paced reaching directions from EEG signals. Frontiers in Neuroscience, 2014, 8, 222.	1.4	60
67	Three-dimensional upper limb movement decoding from EEG signals. , 2013, , .		8
68	Unsupervised adaptation for acceleration-based activity recognition: robustness to sensor displacement and rotation. Personal and Ubiquitous Computing, 2013, 17, 479-490.	1.9	44
69	Robust activity recognition combining anomaly detection and classifier retraining. , 2013, , .		1
70	The Opportunity challenge: A benchmark database for on-body sensor-based activity recognition. Pattern Recognition Letters, 2013, 34, 2033-2042.	2.6	508
71	Opportunistic human activity and context recognition. Computer, 2013, 46, 36-45.	1.2	70
72	On-line anomaly detection and resilience in classifier ensembles. Pattern Recognition Letters, 2013, 34, 1916-1927.	2.6	37

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73	Making the most of context-awareness in brain-computer interfaces. , 2013, , .		6
74	Steering timing prediction in a driving simulator task. , 2013, 2013, 6913-6.		24
75	Offline decoding of upper limb muscle synergies from EEG slow cortical potentials. , 2013, 2013, 3594-7.		10
76	Single trial analysis of slow cortical potentials: a study on anticipation related potentials. Journal of Neural Engineering, 2013, 10, 036014.	1.8	70
77	Inferring driver's turning direction through detection of error related brain activity. , 2013, 2013, 2196-9.		8
78	tDCS Modulates Motor Imagery-Related BCI Features. Biosystems and Biorobotics, 2013, , 647-651.	0.2	5
79	An Iterative Framework for EEG-based Image Search: Robust Retrieval with Weak Classifiers. PLoS ONE, 2013, 8, e72018.	1.1	18
80	Improved recognition of error related potentials through the use of brain connectivity features. , 2012, 2012, 6740-3.		12
81	Anticipation- and error-related EEG signals during realistic human-machine interaction: A study on visual and tactile feedback. , 2012, 2012, 6723-6.		21
82	Detection of anticipatory brain potentials during car driving. , 2012, 2012, 3829-32.		34
83	Real-time prediction of fast and slow delivery of mental commands in a motor imagery BCI: An entropy-based approach. , 2012, , .		4
84	The birth of the brain-controlled wheelchair. , 2012, , .		20
85	Online modulation of the level of assistance in shared control systems. , 2012, , .		17
86	Kinect=IMU? Learning MIMO Signal Mappings to Automatically Translate Activity Recognition Systems across Sensor Modalities. , 2012, , .		22
87	Latency correction of error potentials between different experiments reduces calibration time for single-trial classification. , 2012, 2012, 3288-91.		35
88	Self-paced movement intention detection from human brain signals: Invasive and non-invasive EEG. , 2012, 2012, 3280-3.		28
89	The timing of exploratory decision-making revealed by single-trial topographic EEGanalyses. NeuroImage, 2012, 60, 1959-1969.	2.1	34
90	Detection of self-paced reaching movement intention from EEG signals. Frontiers in Neuroengineering, 2012, 5, 13.	4.8	177

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91	The OPPORTUNITY Framework and Data Processing Ecosystem for Opportunistic Activity and Context Recognition. International Journal of Sensors, Wireless Communications and Control, 2012, 1, 102-125.	0.5	7
92	Cortical current density vs. surface EEG for event-related potential-based Brain-Computer Interface. , 2011, , .		8
93	Learning user habits for semi-autonomous navigation using low throughput interfaces. , 2011, , .		5
94	Single trial recognition of anticipatory slow cortical potentials: The role of spatio-spectral filtering. , 2011, , .		14
95	Detecting anomalies to improve classification performance in opportunistic sensor networks. , 2011, , .		14
96	Dynamic Quantification of Activity Recognition Capabilities in Opportunistic Systems. , 2011, , .		8
97	Combining discriminant and topographic information in BCI: Preliminary results on stroke patients. , 2011, , .		3
98	A hybrid brainâ€“computer interface based on the fusion of electroencephalographic and electromyographic activities. Journal of Neural Engineering, 2011, 8, 025011.	1.8	177
99	Unsupervised Adaptation to On-body Sensor Displacement in Acceleration-Based Activity Recognition. , 2011, , .		16
100	Activity Recognition in Opportunistic Sensor Environments. Procedia Computer Science, 2011, 7, 173-174.	1.2	10
101	Detecting and Rectifying Anomalies in Body Sensor Networks. , 2011, , .		17
102	Benchmarking classification techniques using the Opportunity human activity dataset. , 2011, , .		67
103	Ensemble creation and reconfiguration for activity recognition: An information theoretic approach. , 2011, , .		12
104	Minimizing calibration time using inter-subject information of single-trial recognition of error potentials in brain-computer interfaces. , 2011, 2011, 6369-72.		7
105	Path planning versus cue responding: a bio-inspired model of switching between navigation strategies. Biological Cybernetics, 2010, 103, 299-317.	0.6	45
106	Learning From EEG Error-Related Potentials in Noninvasive Brain-Computer Interfaces. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2010, 18, 381-388.	2.7	198
107	Brain-coupled interaction for semi-autonomous navigation of an assistive robot. Robotics and Autonomous Systems, 2010, 58, 1246-1255.	3.0	90
108	Adaptation of hybrid human-computer interaction systems using EEG error-related potentials. , 2010, 2010, 4226-9.		14

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109	Multimodal Fusion of Muscle and Brain Signals for a Hybrid-BCI. , 2010, 2010, 4343-6.		54
110	Collecting complex activity datasets in highly rich networked sensor environments. , 2010, , .		401
111	On the Use of Brain Decoded Signals for Online User Adaptive Gesture Recognition Systems. Lecture Notes in Computer Science, 2010, , 427-444.	1.0	22
112	Analyzing Interactions between Cue-Guided and Place-Based Navigation with a Computational Model of Action Selection: Influence of Sensory Cues and Training. Lecture Notes in Computer Science, 2010, , 335-346.	1.0	3
113	Fast Recognition of Anticipation-Related Potentials. IEEE Transactions on Biomedical Engineering, 2009, 56, 1257-1260.	2.5	31
114	Discriminative channel selection method for the recognition of anticipation related potentials from CCD estimated cortical activity. , 2009, , .		5
115	OPPORTUNITY: Towards opportunistic activity and context recognition systems. , 2009, , .		55
116	EEG error-related potentials detection with a Bayesian filter. , 2009, , .		6
117	Anticipation based Brain-Computer Interfacing (aBCI). , 2009, , .		6
118	Is there a geometric module for spatial orientation? Insights from a rodent navigation model.. Psychological Review, 2009, 116, 540-566.	2.7	100
119	Characterizing the EEG Correlates of Exploratory Behavior. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2008, 16, 549-556.	2.7	30
120	NON-INVASIVE BRAIN-MACHINE INTERACTION. International Journal of Pattern Recognition and Artificial Intelligence, 2008, 22, 959-972.	0.7	83
121	To Err is Human: Learning from Error Potentials in Brain-Computer Interfaces. , 2008, , 777-782.		15
122	A comparative psychophysical and EEG study of different feedback modalities for HRI. , 2008, , .		11
123	Analyzing Interactions between Navigation Strategies Using a Computational Model of Action Selection. Lecture Notes in Computer Science, 2008, , 71-86.	1.0	8
124	The Use of Brain-Computer Interfacing in Ambient Intelligence. Communications in Computer and Information Science, 2008, , 268-285.	0.4	4
125	Visuo-Spatial Attention Frame Recognition for Brain-Computer Interfaces. , 2008, , 771-775.		2
126	Non-invasive Brain-Actuated Interaction. Lecture Notes in Computer Science, 2007, , 438-447.	1.0	3

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127	Adaptive sensory processing for efficient place coding. Neurocomputing, 2006, 69, 1211-1214.	3.5	0
128	Spatial Representation and Navigation in a Bio-inspired Robot. Lecture Notes in Computer Science, 2005, , 245-264.	1.0	17
129	Robust self-localisation and navigation based on hippocampal place cells. Neural Networks, 2005, 18, 1125-1140.	3.3	66
130	A Computational Model of Parallel Navigation Systems in Rodents. Neuroinformatics, 2005, 3, 223-242.	1.5	44
131	Competition between cue response and place response: a model of rat navigation behaviour. Connection Science, 2005, 17, 167-183.	1.8	5
132	Symbiotic Brain-Machine interaction: Beyond control and monitoring. Frontiers in Human Neuroscience, 0, 12, .	1.0	0