

Ricardo Chavarriaga

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/6644373/publications.pdf>

Version: 2024-02-01

132
papers

4,383
citations

172457

29
h-index

155660

55
g-index

141
all docs

141
docs citations

141
times ranked

3510
citing authors

#	ARTICLE	IF	CITATIONS
1	The Opportunity challenge: A benchmark database for on-body sensor-based activity recognition. <i>Pattern Recognition Letters</i> , 2013, 34, 2033-2042.	4.2	508
2	Collecting complex activity datasets in highly rich networked sensor environments. , 2010, , .		401
3	Errare machinale est: the use of error-related potentials in brain-machine interfaces. <i>Frontiers in Neuroscience</i> , 2014, 8, 208.	2.8	216
4	Learning From EEG Error-Related Potentials in Noninvasive Brain-Computer Interfaces. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2010, 18, 381-388.	4.9	198
5	A hybrid brain-computer interface based on the fusion of electroencephalographic and electromyographic activities. <i>Journal of Neural Engineering</i> , 2011, 8, 025011.	3.5	177
6	Detection of self-paced reaching movement intention from EEG signals. <i>Frontiers in Neuroengineering</i> , 2012, 5, 13.	4.8	177
7	Teaching brain-machine interfaces as an alternative paradigm to neuroprosthetics control. <i>Scientific Reports</i> , 2015, 5, 13893.	3.3	119
8	A brain-controlled exoskeleton with cascaded event-related desynchronization classifiers. <i>Robotics and Autonomous Systems</i> , 2017, 90, 15-23.	5.1	107
9	Is there a geometric module for spatial orientation? Insights from a rodent navigation model.. <i>Psychological Review</i> , 2009, 116, 540-566.	3.8	100
10	Brain-coupled interaction for semi-autonomous navigation of an assistive robot. <i>Robotics and Autonomous Systems</i> , 2010, 58, 1246-1255.	5.1	90
11	NON-INVASIVE BRAIN-MACHINE INTERACTION. <i>International Journal of Pattern Recognition and Artificial Intelligence</i> , 2008, 22, 959-972.	1.2	83
12	Heading for new shores! Overcoming pitfalls in BCI design. <i>Brain-Computer Interfaces</i> , 2017, 4, 60-73.	1.8	73
13	Opportunistic human activity and context recognition. <i>Computer</i> , 2013, 46, 36-45.	1.1	70
14	Single trial analysis of slow cortical potentials: a study on anticipation related potentials. <i>Journal of Neural Engineering</i> , 2013, 10, 036014.	3.5	70
15	Benchmarking classification techniques using the Opportunity human activity dataset. , 2011, , .		67
16	Robust self-localisation and navigation based on hippocampal place cells. <i>Neural Networks</i> , 2005, 18, 1125-1140.	5.9	66
17	Single trial prediction of self-paced reaching directions from EEG signals. <i>Frontiers in Neuroscience</i> , 2014, 8, 222.	2.8	60
18	Classification of upper limb center-out reaching tasks by means of EEG-based continuous decoding techniques. <i>Journal of NeuroEngineering and Rehabilitation</i> , 2017, 14, 9.	4.6	58

#	ARTICLE	IF	CITATIONS
19	OPPORTUNITY: Towards opportunistic activity and context recognition systems. , 2009, , .		55
20	Multimodal Fusion of Muscle and Brain Signals for a Hybrid-BCI. , 2010, 2010, 4343-6.		54
21	Human EEG reveals distinct neural correlates of power and precision grasping types. NeuroImage, 2018, 181, 635-644.	4.2	47
22	EEG-Based Lower-Limb Movement Onset Decoding: Continuous Classification and Asynchronous Detection. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2018, 26, 1626-1635.	4.9	46
23	Path planning versus cue responding: a bio-inspired model of switching between navigation strategies. Biological Cybernetics, 2010, 103, 299-317.	1.3	45
24	A Computational Model of Parallel Navigation Systems in Rodents. Neuroinformatics, 2005, 3, 223-242.	2.8	44
25	Unsupervised adaptation for acceleration-based activity recognition: robustness to sensor displacement and rotation. Personal and Ubiquitous Computing, 2013, 17, 479-490.	2.8	44
26	Action prediction based on anticipatory brain potentials during simulated driving. Journal of Neural Engineering, 2015, 12, 066006.	3.5	42
27	Latency correction of event-related potentials between different experimental protocols. Journal of Neural Engineering, 2014, 11, 036005.	3.5	41
28	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.	4.9	38
29	On-line anomaly detection and resilience in classifier ensembles. Pattern Recognition Letters, 2013, 34, 1916-1927.	4.2	37
30	Tiny noise, big mistakes: adversarial perturbations induce errors in brain-computer interface spellers. National Science Review, 2021, 8, nwaa233.	9.5	37
31	Latency correction of error potentials between different experiments reduces calibration time for single-trial classification. , 2012, 2012, 3288-91.		35
32	Workshops of the Fifth International Brain-Computer Interface Meeting: Defining the Future. Brain-Computer Interfaces, 2014, 1, 27-49.	1.8	35
33	Detection of anticipatory brain potentials during car driving. , 2012, 2012, 3829-32.		34
34	The timing of exploratory decision-making revealed by single-trial topographic EEG analyses. NeuroImage, 2012, 60, 1959-1969.	4.2	34
35	Fast Recognition of Anticipation-Related Potentials. IEEE Transactions on Biomedical Engineering, 2009, 56, 1257-1260.	4.2	31
36	Characterizing the EEG Correlates of Exploratory Behavior. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2008, 16, 549-556.	4.9	30

#	ARTICLE	IF	CITATIONS
37	Self-paced movement intention detection from human brain signals: Invasive and non-invasive EEG. , 2012, 2012, 3280-3.		28
38	Harnessing Prefrontal Cognitive Signals for Brain-Computer Interfaces. Trends in Biotechnology, 2017, 35, 585-597.	9.3	28
39	Mobile brain/body imaging of landmark-based navigation with high-density EEG. European Journal of Neuroscience, 2021, 54, 8256-8282.	2.6	28
40	International data governance for neuroscience. Neuron, 2022, 110, 600-612.	8.1	28
41	Steering timing prediction in a driving simulator task. , 2013, 2013, 6913-6.		24
42	Workshops of the Sixth International Brain-Computer Interface Meeting: brain-computer interfaces past, present, and future. Brain-Computer Interfaces, 2017, 4, 3-36.	1.8	24
43	Adaptive Assistance for Brain-Computer Interfaces by Online Prediction of Command Reliability. IEEE Computational Intelligence Magazine, 2016, 11, 32-39.	3.2	23
44	Brain-actuated gait trainer with visual and proprioceptive feedback. Journal of Neural Engineering, 2017, 14, 056017.	3.5	23
45	Differential contributions of subthalamic beta rhythms and 1/f broadband activity to motor symptoms in Parkinson's disease. Npj Parkinson's Disease, 2018, 4, 32.	5.3	23
46	Customizing skills for assistive robotic manipulators, an inverse reinforcement learning approach with error-related potentials. Communications Biology, 2021, 4, 1406.	4.4	23
47	Kinect=IMU? Learning MIMO Signal Mappings to Automatically Translate Activity Recognition Systems across Sensor Modalities. , 2012, , .		22
48	On the Use of Brain Decoded Signals for Online User Adaptive Gesture Recognition Systems. Lecture Notes in Computer Science, 2010, , 427-444.	1.3	22
49	Anticipation- and error-related EEG signals during realistic human-machine interaction: A study on visual and tactile feedback. , 2012, 2012, 6723-6.		21
50	Decoding Neural Correlates of Cognitive States to Enhance Driving Experience. IEEE Transactions on Emerging Topics in Computational Intelligence, 2018, 2, 288-297.	4.9	21
51	The birth of the brain-controlled wheelchair. , 2012, , .		20
52	Detecting intention to grasp during reaching movements from EEG. , 2015, 2015, 1115-8.		20
53	Discriminant brain connectivity patterns of performance monitoring at average and single-trial levels. NeuroImage, 2015, 120, 64-74.	4.2	20
54	Decoding of Self-paced Lower-Limb Movement Intention: A Case Study on the Influence Factors. Frontiers in Human Neuroscience, 2017, 11, 560.	2.0	19

#	ARTICLE	IF	CITATIONS
55	An Iterative Framework for EEG-based Image Search: Robust Retrieval with Weak Classifiers. PLoS ONE, 2013, 8, e72018.	2.5	18
56	Spatial Representation and Navigation in a Bio-inspired Robot. Lecture Notes in Computer Science, 2005, , 245-264.	1.3	17
57	Detecting and Rectifying Anomalies in Body Sensor Networks. , 2011, , .		17
58	Online modulation of the level of assistance in shared control systems. , 2012, , .		17
59	Unsupervised Adaptation to On-body Sensor Displacement in Acceleration-Based Activity Recognition. , 2011, , .		16
60	Interactions of spatial strategies producing generalization gradient and blocking: A computational approach. PLoS Computational Biology, 2018, 14, e1006092.	3.2	16
61	Inferring subjective preferences on robot trajectories using EEG signals. , 2019, , .		16
62	Uncovering EEG Correlates of Covert Attention in Soccer Goalkeepers: Towards Innovative Sport Training Procedures. Scientific Reports, 2020, 10, 1705.	3.3	16
63	To Err is Human: Learning from Error Potentials in Brain-Computer Interfaces. , 2008, , 777-782.		15
64	Adaptation of hybrid human-computer interaction systems using EEG error-related potentials. , 2010, 2010, 4226-9.		14
65	Single trial recognition of anticipatory slow cortical potentials: The role of spatio-spectral filtering. , 2011, , .		14
66	Detecting anomalies to improve classification performance in opportunistic sensor networks. , 2011, , .		14
67	Asynchronous Decoding of Error Potentials during the Monitoring of a Reaching Task. , 2015, , .		13
68	Quantifying the time for accurate EEG decoding of single value-based decisions. Journal of Neuroscience Methods, 2015, 250, 114-125.	2.5	13
69	Ensemble creation and reconfiguration for activity recognition: An information theoretic approach. , 2011, , .		12
70	Improved recognition of error related potentials through the use of brain connectivity features. , 2012, 2012, 6740-3.		12
71	Spatial covariance improves BCI performance for late ERPs components with high temporal variability. Journal of Neural Engineering, 2020, 17, 036030.	3.5	12
72	A comparative psychophysical and EEG study of different feedback modalities for HRI. , 2008, , .		11

#	ARTICLE	IF	CITATIONS
73	Application of hybrid BCI and exergames for balance rehabilitation after stroke. , 2014, , .		11
74	Spatial filters yield stable features for error-related potentials across conditions. , 2016, , .		11
75	EEG Correlates of Difficulty Levels in Dynamical Transitions of Simulated Flying and Mapping Tasks. IEEE Transactions on Human-Machine Systems, 2021, 51, 99-108.	3.5	11
76	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.	3.5	11
77	Activity Recognition in Opportunistic Sensor Environments. Procedia Computer Science, 2011, 7, 173-174.	2.0	10
78	Offline decoding of upper limb muscle synergies from EEG slow cortical potentials. , 2013, 2013, 3594-7.		10
79	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.	1.8	10
80	User Adaptation to Closed-Loop Decoding of Motor Imagery Termination. IEEE Transactions on Biomedical Engineering, 2021, 68, 3-10.	4.2	10
81	BCI and motion capture technologies for rehabilitation based on videogames. , 2014, , .		9
82	Quantifying Electrode Reliability During Brain-Computer Interface Operation. IEEE Transactions on Biomedical Engineering, 2015, 62, 858-864.	4.2	9
83	Turning negative into positives! Exploiting "negative" results in Brain-Computer Interface (BMI) research. Brain-Computer Interfaces, 2019, 6, 178-189.	1.8	9
84	Cortical current density vs. surface EEG for event-related potential-based Brain-Computer Interface. , 2011, , .		8
85	Dynamic Quantification of Activity Recognition Capabilities in Opportunistic Systems. , 2011, , .		8
86	Three-dimensional upper limb movement decoding from EEG signals. , 2013, , .		8
87	Inferring driver's turning direction through detection of error related brain activity. , 2013, 2013, 2196-9.		8
88	Workshops of the seventh international brain-computer interface meeting: not getting lost in translation. Brain-Computer Interfaces, 2019, 6, 71-101.	1.8	8
89	A Survey of Un-, Weakly-, and Semi-Supervised Learning Methods for Noisy, Missing and Partial Labels in Industrial Vision Applications. , 2021, , .		8
90	Analyzing Interactions between Navigation Strategies Using a Computational Model of Action Selection. Lecture Notes in Computer Science, 2008, , 71-86.	1.3	8

#	ARTICLE	IF	CITATIONS
91	Minimizing calibration time using inter-subject information of single-trial recognition of error potentials in brain-computer interfaces. , 2011, 2011, 6369-72.		7
92	Brain Correlates of Lane Changing Reaction Time in Simulated Driving. , 2015, , .		7
93	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.	0.7	7
94	EEG error-related potentials detection with a Bayesian filter. , 2009, , .		6
95	Anticipation based Brain-Computer Interfacing (aBCI). , 2009, , .		6
96	Making the most of context-awareness in brain-computer interfaces. , 2013, , .		6
97	Multidisciplinary design of suitable assistive technologies for motor disabilities in Colombia. , 2014, , .		6
98	EEG correlates of active visual search during simulated driving: An exploratory study. , 2014, , .		6
99	Decoding fast-paced error-related potentials in monitoring protocols. , 2015, 2015, 1111-4.		6
100	Endogenous Control of Powered Lower-Limb Exoskeleton. Biosystems and Biorobotics, 2017, , 115-119.	0.3	6
101	Using Robust Principal Component Analysis to Reduce EEG Intra-Trial Variability. , 2018, 2018, 1956-1959.		6
102	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.	2.3	6
103	Competition between cue response and place response: a model of rat navigation behaviour. Connection Science, 2005, 17, 167-183.	3.0	5
104	Discriminative channel selection method for the recognition of anticipation related potentials from CCD estimated cortical activity. , 2009, , .		5
105	Learning user habits for semi-autonomous navigation using low throughput interfaces. , 2011, , .		5
106	Evaluating decoding performance of upper limb imagined trajectories during center-out reaching tasks. , 2016, , .		5
107	tDCS Modulates Motor Imagery-Related BCI Features. Biosystems and Biorobotics, 2013, , 647-651.	0.3	5
108	Real-time prediction of fast and slow delivery of mental commands in a motor imagery BCI: An entropy-based approach. , 2012, , .		4

#	ARTICLE	IF	CITATIONS
109	Superposition model for Steady State Visually Evoked Potentials. , 2016, , .		4
110	Analysis of EEG Correlates of Perceived Difficulty in Dynamically Changing Flying Tasks. , 2018, , .		4
111	Context-Aware Learning for Generative Models. IEEE Transactions on Neural Networks and Learning Systems, 2021, 32, 3471-3483.	11.3	4
112	The Use of Brain-Computer Interfacing in Ambient Intelligence. Communications in Computer and Information Science, 2008, , 268-285.	0.5	4
113	Workshops of the eighth international brain-computer interface meeting: BCIs: the next frontier. Brain-Computer Interfaces, 2022, 9, 69-101.	1.8	4
114	Combining discriminant and topographic information in BCI: Preliminary results on stroke patients. , 2011, , .		3
115	Standards for Neurotechnologies and Brain-Machine Interfacing [Standards]. IEEE Systems, Man, and Cybernetics Magazine, 2020, 6, 50-51.	1.4	3
116	EEG-Based Online Regulation of Difficulty in Simulated Flying. IEEE Transactions on Affective Computing, 2023, 14, 394-405.	8.3	3
117	Non-invasive Brain-Actuated Interaction. Lecture Notes in Computer Science, 2007, , 438-447.	1.3	3
118	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.	1.3	3
119	Closed-loop EEG study on visual recognition during driving. Journal of Neural Engineering, 2021, 18, 026010.	3.5	2
120	Visuo-Spatial Attention Frame Recognition for Brain-Computer Interfaces. , 2008, , 771-775.		2
121	Robust activity recognition combining anomaly detection and classifier retraining. , 2013, , .		1
122	Moving Brain-Controlled Devices Outside the Lab: Principles and Applications. Trends in Augmentation of Human Performance, 2015, , 73-94.	0.4	1
123	Inverse solutions for brain-computer interfaces: Effects of regularisation on localisation and classification. , 2017, , .		1
124	Adaptive sensory processing for efficient place coding. Neurocomputing, 2006, 69, 1211-1214.	5.9	0
125	Prediction of command delivery time for BCI. , 2014, , .		0
126	10. Brain-Machine Symbiosis. , 2015, , 175-197.		0

#	ARTICLE	IF	CITATIONS
127	Stream fusion for multi-stream automatic speech recognition. International Journal of Speech Technology, 2016, 19, 669-675.	2.2	0
128	Detection of movement related cortical potential: Effects of causal vs. non-causal processing. , 2016, 2016, 5733-5736.		0
129	An Approach to a Phase Model for Steady State Visually Evoked Potentials. Biosystems and Biorobotics, 2017, , 1481-1489.	0.3	0
130	The CLAIRE COVID-19 initiative: approach, experiences and recommendations. Ethics and Information Technology, 2021, 23, 127-133.	3.8	0
131	Two to Trust: AutoML for Safe Modelling and Interpretable Deep Learning for Robustness. Lecture Notes in Computer Science, 2021, , 268-275.	1.3	0
132	Symbiotic Brain-Machine interaction: Beyond control and monitoring. Frontiers in Human Neuroscience, 0, 12, .	2.0	0