

Ricardo Chavarriaga

List of Publications by Year in descending order

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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 | EEG-Based Online Regulation of Difficulty in Simulated Flying. IEEE Transactions on Affective Computing, 2023, 14, 394-405. | 8.3 | 3 |
| 2 | Workshops of the eighth international brain-computer interface meeting: BCIs: the next frontier. Brain-Computer Interfaces, 2022, 9, 69-101. | 1.8 | 4 |
| 3 | International data governance for neuroscience. Neuron, 2022, 110, 600-612. | 8.1 | 28 |
| 4 | Context-Aware Learning for Generative Models. IEEE Transactions on Neural Networks and Learning Systems, 2021, 32, 3471-3483. | 11.3 | 4 |
| 5 | User Adaptation to Closed-Loop Decoding of Motor Imagery Termination. IEEE Transactions on Biomedical Engineering, 2021, 68, 3-10. | 4.2 | 10 |
| 6 | Tiny noise, big mistakes: adversarial perturbations induce errors in brain-computer interface spellers. National Science Review, 2021, 8, nwaa233. | 9.5 | 37 |
| 7 | The CLAIRE COVID-19 initiative: approach, experiences and recommendations. Ethics and Information Technology, 2021, 23, 127-133. | 3.8 | 0 |
| 8 | Closed-loop EEG study on visual recognition during driving. Journal of Neural Engineering, 2021, 18, 026010. | 3.5 | 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. | 3.5 | 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. | 3.5 | 11 |
| 11 | Mobile brain/body imaging of landmark-based navigation with high-density EEG. European Journal of Neuroscience, 2021, 54, 8256-8282. | 2.6 | 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. | 2.3 | 6 |
| 14 | Two to Trust: AutoML for Safe Modelling and Interpretable Deep Learning for Robustness. Lecture Notes in Computer Science, 2021, , 268-275. | 1.3 | 0 |
| 15 | Customizing skills for assistive robotic manipulators, an inverse reinforcement learning approach with error-related potentials. Communications Biology, 2021, 4, 1406. | 4.4 | 23 |
| 16 | Standards for Neurotechnologies and Brain-Machine Interfacing [Standards]. IEEE Systems, Man, and Cybernetics Magazine, 2020, 6, 50-51. | 1.4 | 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. | 1.8 | 10 |
| 18 | Uncovering EEG Correlates of Covert Attention in Soccer Goalkeepers: Towards Innovative Sport Training Procedures. Scientific Reports, 2020, 10, 1705. | 3.3 | 16 |

| # | ARTICLE | IF | CITATIONS |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 19 | Spatial covariance improves BCI performance for late ERPs components with high temporal variability. Journal of Neural Engineering, 2020, 17, 036030. | 3.5 | 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. | 1.8 | 8 |
| 22 | Turning negative into positives! Exploiting "negative" results in Brain-Computer Interface (BMI) research. Brain-Computer Interfaces, 2019, 6, 178-189. | 1.8 | 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 Parkinson's disease. Npj Parkinson's Disease, 2018, 4, 32. | 5.3 | 23 |
| 26 | Interactions of spatial strategies producing generalization gradient and blocking: A computational approach. PLoS Computational Biology, 2018, 14, e1006092. | 3.2 | 16 |
| 27 | Human EEG reveals distinct neural correlates of power and precision grasping types. NeuroImage, 2018, 181, 635-644. | 4.2 | 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. | 4.9 | 46 |
| 29 | 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 |
| 30 | 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 |
| 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. | 4.6 | 58 |
| 32 | Harnessing Prefrontal Cognitive Signals for Brain-Computer Interfaces. Trends in Biotechnology, 2017, 35, 585-597. | 9.3 | 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. | 4.9 | 38 |
| 34 | Heading for new shores! Overcoming pitfalls in BCI design. Brain-Computer Interfaces, 2017, 4, 60-73. | 1.8 | 73 |
| 35 | Brain-actuated gait trainer with visual and proprioceptive feedback. Journal of Neural Engineering, 2017, 14, 056017. | 3.5 | 23 |
| 36 | An Approach to a Phase Model for Steady State Visually Evoked Potentials. Biosystems and Biorobotics, 2017, , 1481-1489. | 0.3 | 0 |

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| 37 | A brain-controlled exoskeleton with cascaded event-related desynchronization classifiers. <i>Robotics and Autonomous Systems</i> , 2017, 90, 15-23. | 5.1 | 107 |
| 38 | Endogenous Control of Powered Lower-Limb Exoskeleton. <i>Biosystems and Biorobotics</i> , 2017, , 115-119. | 0.3 | 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. <i>Frontiers in Human Neuroscience</i> , 2017, 11, 560. | 2.0 | 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. <i>International Journal of Speech Technology</i> , 2016, 19, 669-675. | 2.2 | 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. <i>IEEE Computational Intelligence Magazine</i> , 2016, 11, 32-39. | 3.2 | 23 |
| 47 | Action prediction based on anticipatory brain potentials during simulated driving. <i>Journal of Neural Engineering</i> , 2015, 12, 066006. | 3.5 | 42 |
| 48 | Teaching brain-machine interfaces as an alternative paradigm to neuroprosthetics control. <i>Scientific Reports</i> , 2015, 5, 13893. | 3.3 | 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 Brain-Computer Interface Operation. <i>IEEE Transactions on Biomedical Engineering</i> , 2015, 62, 858-864. | 4.2 | 9 |

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| 55 | Discriminant brain connectivity patterns of performance monitoring at average and single-trial levels. <i>NeuroImage</i> , 2015, 120, 64-74. | 4.2 | 20 |
| 56 | Moving Brain-Controlled Devices Outside the Lab: Principles and Applications. <i>Trends in Augmentation of Human Performance</i> , 2015, , 73-94. | 0.4 | 1 |
| 57 | Quantifying the time for accurate EEG decoding of single value-based decisions. <i>Journal of Neuroscience Methods</i> , 2015, 250, 114-125. | 2.5 | 13 |
| 58 | Errare machinale est: the use of error-related potentials in brain-machine interfaces. <i>Frontiers in Neuroscience</i> , 2014, 8, 208. | 2.8 | 216 |
| 59 | Latency correction of event-related potentials between different experimental protocols. <i>Journal of Neural Engineering</i> , 2014, 11, 036005. | 3.5 | 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. <i>Brain-Computer Interfaces</i> , 2014, 1, 27-49. | 1.8 | 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. <i>Frontiers in Neuroscience</i> , 2014, 8, 222. | 2.8 | 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. <i>Personal and Ubiquitous Computing</i> , 2013, 17, 479-490. | 2.8 | 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. <i>Pattern Recognition Letters</i> , 2013, 34, 2033-2042. | 4.2 | 508 |
| 71 | Opportunistic human activity and context recognition. <i>Computer</i> , 2013, 46, 36-45. | 1.1 | 70 |
| 72 | On-line anomaly detection and resilience in classifier ensembles. <i>Pattern Recognition Letters</i> , 2013, 34, 1916-1927. | 4.2 | 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. | 3.5 | 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. | 0.3 | 5 |
| 79 | An Iterative Framework for EEG-based Image Search: Robust Retrieval with Weak Classifiers. PLoS ONE, 2013, 8, e72018. | 2.5 | 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. | 4.2 | 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. | 0.7 | 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 brain-computer interface based on the fusion of electroencephalographic and electromyographic activities. Journal of Neural Engineering, 2011, 8, 025011. | 3.5 | 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. | 2.0 | 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. | 1.3 | 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. | 4.9 | 198 |
| 107 | Brain-coupled interaction for semi-autonomous navigation of an assistive robot. Robotics and Autonomous Systems, 2010, 58, 1246-1255. | 5.1 | 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. | 1.3 | 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. | 1.3 | 3 |
| 113 | Fast Recognition of Anticipation-Related Potentials. IEEE Transactions on Biomedical Engineering, 2009, 56, 1257-1260. | 4.2 | 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. | 3.8 | 100 |
| 119 | Characterizing the EEG Correlates of Exploratory Behavior. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2008, 16, 549-556. | 4.9 | 30 |
| 120 | NON-INVASIVE BRAIN-MACHINE INTERACTION. International Journal of Pattern Recognition and Artificial Intelligence, 2008, 22, 959-972. | 1.2 | 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. | 1.3 | 8 |
| 124 | The Use of Brain-Computer Interfacing in Ambient Intelligence. Communications in Computer and Information Science, 2008, , 268-285. | 0.5 | 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. | 1.3 | 3 |

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| 127 | Adaptive sensory processing for efficient place coding. <i>Neurocomputing</i> , 2006, 69, 1211-1214. | 5.9 | 0 |
| 128 | Spatial Representation and Navigation in a Bio-inspired Robot. <i>Lecture Notes in Computer Science</i> , 2005, , 245-264. | 1.3 | 17 |
| 129 | Robust self-localisation and navigation based on hippocampal place cells. <i>Neural Networks</i> , 2005, 18, 1125-1140. | 5.9 | 66 |
| 130 | A Computational Model of Parallel Navigation Systems in Rodents. <i>Neuroinformatics</i> , 2005, 3, 223-242. | 2.8 | 44 |
| 131 | Competition between cue response and place response: a model of rat navigation behaviour. <i>Connection Science</i> , 2005, 17, 167-183. | 3.0 | 5 |
| 132 | Symbiotic Brain-Machine interaction: Beyond control and monitoring. <i>Frontiers in Human Neuroscience</i> , 0, 12, . | 2.0 | 0 |