

Ernesto Pereda

List of Publications by Year in descending order

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Version: 2024-02-01

80
papers

3,322
citations

236612

25
h-index

161609

54
g-index

88
all docs

88
docs citations

88
times ranked

4172
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 1 | Nonlinear multivariate analysis of neurophysiological signals. Progress in Neurobiology, 2005, 77, 1-37. | 2.8 | 983 |
| 2 | HERMES: Towards an Integrated Toolbox to Characterize Functional and Effective Brain Connectivity. Neuroinformatics, 2013, 11, 405-434. | 1.5 | 223 |
| 3 | Non-linear behaviour of human EEG: fractal exponent versus correlation dimension in awake and sleep stages. Neuroscience Letters, 1998, 250, 91-94. | 1.0 | 171 |
| 4 | Long-Range Synchrony in the β Band: Role in Music Perception. Journal of Neuroscience, 2001, 21, 6329-6337. | 1.7 | 138 |
| 5 | Phase locking value revisited: teaching new tricks to an old dog. Journal of Neural Engineering, 2018, 15, 056011. | 1.8 | 109 |
| 6 | Functional Connectivity in Mild Cognitive Impairment During a Memory Task: Implications for the Disconnection Hypothesis. Journal of Alzheimer's Disease, 2010, 22, 183-193. | 1.2 | 105 |
| 7 | Assessment of changing interdependencies between human electroencephalograms using nonlinear methods. Physica D: Nonlinear Phenomena, 2001, 148, 147-158. | 1.3 | 76 |
| 8 | Scopolamine effects on functional brain connectivity: a pharmacological model of Alzheimer's disease. Scientific Reports, 2015, 5, 9748. | 1.6 | 75 |
| 9 | Choice of Magnetometers and Gradiometers after Signal Space Separation. Sensors, 2017, 17, 2926. | 2.1 | 74 |
| 10 | Multimodal description of whole brain connectivity: A comparison of resting state MEG, fMRI, and DWI. Human Brain Mapping, 2016, 37, 20-34. | 1.9 | 68 |
| 11 | Hypersynchronization in mild cognitive impairment: the λ model. Brain, 2019, 142, 3936-3950. | 3.7 | 68 |
| 12 | What graph theory actually tells us about resting state interictal MEG epileptic activity. NeuroImage: Clinical, 2015, 8, 503-515. | 1.4 | 67 |
| 13 | Best of both worlds: promise of combining brain stimulation and brain connectome. Frontiers in Systems Neuroscience, 2014, 8, 132. | 1.2 | 61 |
| 14 | Interdependencies in the spontaneous EEG while listening to music. International Journal of Psychophysiology, 2001, 42, 287-301. | 0.5 | 53 |
| 15 | How to Build a Functional Connectomic Biomarker for Mild Cognitive Impairment From Source Reconstructed MEG Resting-State Activity: The Combination of ROI Representation and Connectivity Estimator Matters. Frontiers in Neuroscience, 2018, 12, 306. | 1.4 | 48 |
| 16 | Interhemispheric differences in awake and sleep human EEG: a comparison between non-linear and spectral measures. Neuroscience Letters, 1999, 263, 37-40. | 1.0 | 47 |
| 17 | Assessment of electroencephalographic functional connectivity in term and preterm neonates. Clinical Neurophysiology, 2011, 122, 696-702. | 0.7 | 47 |
| 18 | Different theta frameworks coexist in the rat hippocampus and are coordinated during memory-guided and novelty tasks. ELife, 2020, 9, . | 2.8 | 47 |

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|----|---|-----|-----------|
| 19 | Detection and sources of nonlinearity in the variability of cardiac R-R intervals and blood pressure in rats. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2000, 279, H3040-H3046. | 1.5 | 43 |
| 20 | Effective detection of coupling in short and noisy bivariate data. <i>IEEE Transactions on Systems, Man, and Cybernetics</i> , 2003, 33, 85-95. | 5.5 | 39 |
| 21 | Measuring second language proficiency with EEG synchronization: how functional cortical networks and hemispheric involvement differ as a function of proficiency level in second language speakers. <i>Second Language Research</i> , 2009, 25, 77-106. | 1.2 | 33 |
| 22 | The variability of EEG functional connectivity of young ADHD subjects in different resting states. <i>Clinical Neurophysiology</i> , 2016, 127, 1321-1330. | 0.7 | 33 |
| 23 | Dynamic low frequency EEG phase synchronization patterns during proactive control of task switching. <i>NeuroImage</i> , 2019, 186, 70-82. | 2.1 | 33 |
| 24 | Performance analysis of univariate and multivariate EEG measurements in the diagnosis of ADHD. <i>Clinical Neurophysiology</i> , 2013, 124, 1139-1150. | 0.7 | 31 |
| 25 | Comparison of Photonic Reservoir Computing Systems for Fiber Transmission Equalization. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2020, 26, 1-9. | 1.9 | 31 |
| 26 | Cognitive reserve is associated with the functional organization of the brain in healthy aging: a MEG study. <i>Frontiers in Aging Neuroscience</i> , 2014, 6, 125. | 1.7 | 29 |
| 27 | Neuronal activity in the substantia nigra in the anaesthetized rat has fractal characteristics. Evidence for firing-code patterns in the basal ganglia. <i>Experimental Brain Research</i> , 2003, 151, 167-172. | 0.7 | 27 |
| 28 | The blessing of Dimensionality: Feature Selection outperforms functional connectivity-based feature transformation to classify ADHD subjects from EEG patterns of phase synchronisation. <i>PLoS ONE</i> , 2018, 13, e0201660. | 1.1 | 27 |
| 29 | Comparing Generalized and Phase Synchronization in Cardiovascular and Cardiorespiratory Signals. <i>IEEE Transactions on Biomedical Engineering</i> , 2005, 52, 578-583. | 2.5 | 25 |
| 30 | Neural oscillatory mechanisms during novel grammar learning underlying language analytical abilities. <i>Brain and Language</i> , 2017, 175, 99-110. | 0.8 | 25 |
| 31 | Efficient Computation of Functional Brain Networks: toward Real-Time Functional Connectivity. <i>Frontiers in Neuroinformatics</i> , 2017, 11, 8. | 1.3 | 25 |
| 32 | Aberrant MEG multi-frequency phase temporal synchronization predicts conversion from mild cognitive impairment-to-Alzheimer's disease. <i>NeuroImage: Clinical</i> , 2019, 24, 101972. | 1.4 | 25 |
| 33 | Electrical Brain Responses to an Auditory Illusion and the Impact of Musical Expertise. <i>PLoS ONE</i> , 2015, 10, e0129486. | 1.1 | 24 |
| 34 | Automated Detection of Epileptic Biomarkers in Resting-State Interictal MEG Data. <i>Frontiers in Neuroinformatics</i> , 2017, 11, 43. | 1.3 | 24 |
| 35 | Biomagnetic biomarkers for dementia: A pilot multicentre study with a recommended methodological framework for magnetoencephalography. <i>Alzheimer's and Dementia: Diagnosis, Assessment and Disease Monitoring</i> , 2019, 11, 450-462. | 1.2 | 24 |
| 36 | Functional connectivity of the hippocampus and its subfields in resting-state networks. <i>European Journal of Neuroscience</i> , 2021, 53, 3378-3393. | 1.2 | 24 |

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|----|---|-----|-----------|
| 37 | Topography of EEG complexity in human neonates: Effect of the postmenstrual age and the sleep state. <i>Neuroscience Letters</i> , 2006, 394, 152-157. | 1.0 | 23 |
| 38 | Maturational Changes in the Interdependencies between Cortical Brain Areas of Neonates during Sleep. <i>Cerebral Cortex</i> , 2006, 17, 583-590. | 1.6 | 23 |
| 39 | Firing regulation in dopaminergic cells: effect of the partial degeneration of nigrostriatal system in surviving neurons. <i>European Journal of Neuroscience</i> , 2003, 18, 53-60. | 1.2 | 22 |
| 40 | On a Possible Relationship between Linguistic Expertise and EEG Gamma Band Phase Synchrony. <i>Frontiers in Psychology</i> , 2011, 2, 334. | 1.1 | 22 |
| 41 | Nonlinear, fractal, and spectral analysis of the EEG of lizard, <i>Gallotia galloti</i> . <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 1999, 277, R86-R93. | 0.9 | 20 |
| 42 | How is firing activity of substantia nigra cells regulated? Relevance of pattern-code in the basal ganglia. <i>Synapse</i> , 2003, 49, 216-225. | 0.6 | 18 |
| 43 | Electroencephalography signatures of attention-deficit/hyperactivity disorder: clinical utility. <i>Neuropsychiatric Disease and Treatment</i> , 2015, 11, 2755. | 1.0 | 14 |
| 44 | A Neuro-Inspired System for Online Learning and Recognition of Parallel Spike Trains, Based on Spike Latency, and Heterosynaptic STDP. <i>Frontiers in Neuroscience</i> , 2018, 12, 780. | 1.4 | 14 |
| 45 | Non-linear asymmetric interdependencies in the electroencephalogram of healthy term neonates during sleep. <i>Neuroscience Letters</i> , 2003, 337, 101-105. | 1.0 | 13 |
| 46 | Resting state connectivity and network parameter analysis in alcohol dependent males. A simultaneous EEG-MEG study. <i>Journal of Neuroscience Research</i> , 2020, 98, 1857-1876. | 1.3 | 13 |
| 47 | Functional associations at global brain level during perception of an auditory illusion by applying maximal information coefficient. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2018, 491, 708-715. | 1.2 | 12 |
| 48 | Non-Linear Dynamical Analysis of Resting Tremor for Demand-Driven Deep Brain Stimulation. <i>Sensors</i> , 2019, 19, 2507. | 2.1 | 11 |
| 49 | Applications of Fractal and Non-linear Time Series Analysis to the Study of Short-term Cardiovascular Control. <i>Current Vascular Pharmacology</i> , 2004, 2, 149-162. | 0.8 | 11 |
| 50 | Hypersynchronized Magnetoencephalography Brain Networks in Patients with Mild Cognitive Impairment and Alzheimer's Disease in Down Syndrome. <i>Brain Connectivity</i> , 2021, 11, 725-733. | 0.8 | 9 |
| 51 | On the role of the entorhinal cortex in the effective connectivity of the hippocampal formation. <i>Chaos</i> , 2017, 27, 047401. | 1.0 | 8 |
| 52 | Anomalous Diffuse CO2 Emissions at the Masaya Volcano (Nicaragua) Related to Seismic-Volcanic Unrest. <i>Pure and Applied Geophysics</i> , 2014, 171, 1791-1804. | 0.8 | 7 |
| 53 | 26th Annual Computational Neuroscience Meeting (CNS*2017): Part 2. <i>BMC Neuroscience</i> , 2017, 18, . | 0.8 | 7 |
| 54 | Modeling the Switching Behavior of Functional Connectivity Microstates (FC _{1/4} states) as a Novel Biomarker for Mild Cognitive Impairment. <i>Frontiers in Neuroscience</i> , 2019, 13, 542. | 1.4 | 7 |

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|----|---|-----|-----------|
| 55 | Relationship between cortical electrical and cardiac autonomic activities in the awake lizard, <i>Gallotia galloti</i> . <i>The Journal of Experimental Zoology</i> , 2000, 287, 21-28. | 1.4 | 6 |
| 56 | Multivariate extension of phase synchronization improves the estimation of region-to-region source space functional connectivity. <i>Brain Multiphysics</i> , 2021, 2, 100021. | 0.8 | 6 |
| 57 | ASMR amplifies low frequency and reduces high frequency oscillations. <i>Cortex</i> , 2022, 149, 85-100. | 1.1 | 6 |
| 58 | Application of Non-linear Analysis to Intensity Oscillations of the Chromospheric Bright Points. <i>Solar Physics</i> , 2001, 199, 267-290. | 1.0 | 5 |
| 59 | Nonlinear Dynamical Analysis of the Interdependence Between Central and Autonomic Nervous Systems in Neonates During Sleep. <i>Journal of Biological Physics</i> , 2008, 34, 405-412. | 0.7 | 5 |
| 60 | Autonomic mediation of the interdependence between variability signals of heart rate and blood pressure in the lizard <i>Gallotia galloti</i> . <i>Canadian Journal of Zoology</i> , 2012, 90, 839-848. | 0.4 | 5 |
| 61 | nMNSD – A Spiking Neuron-Based Classifier That Combines Weight-Adjustment and Delay-Shift. <i>Frontiers in Neuroscience</i> , 2021, 15, 582608. | 1.4 | 5 |
| 62 | Time-related interdependence between low-frequency cortical electrical activity and respiratory activity in lizard, <i>Gallotia galloti</i> . <i>Journal of Experimental Zoology Part A, Comparative Experimental Biology</i> , 2005, 303A, 217-226. | 1.3 | 4 |
| 63 | Limits to detection of generalized synchronization in delay-coupled chaotic oscillators. <i>Physical Review E</i> , 2013, 88, 062924. | 0.8 | 4 |
| 64 | Assessment of ADHD Through Electroencephalographic Measures of Functional Connectivity. , 2015, , . | | 4 |
| 65 | Evidence of state-dependent interhemispheric relationships in lizard EEG during the awake state. <i>IEEE Transactions on Biomedical Engineering</i> , 2002, 49, 548-555. | 2.5 | 3 |
| 66 | An index of signal mode complexity based on orthogonal transformation. <i>Journal of Computational Neuroscience</i> , 2010, 29, 13-22. | 0.6 | 3 |
| 67 | Neurocognitive Decoding of Aesthetic Appreciation. , 2016, , 87-106. | | 3 |
| 68 | BDNF Val66Met Polymorphism and Gamma Band Disruption in Resting State Brain Functional Connectivity: A Magnetoencephalography Study in Cognitively Intact Older Females. <i>Frontiers in Neuroscience</i> , 2018, 12, 684. | 1.4 | 3 |
| 69 | Modifications in the Topological Structure of EEG Functional Connectivity Networks during Listening Tonal and Atonal Concert Music in Musicians and Non-Musicians. <i>Brain Sciences</i> , 2021, 11, 159. | 1.1 | 3 |
| 70 | FNS allows efficient event-driven spiking neural network simulations based on a neuron model supporting spike latency. <i>Scientific Reports</i> , 2021, 11, 12160. | 1.6 | 3 |
| 71 | A Structural Connectivity Disruption One Decade before the Typical Age for Dementia: A Study in Healthy Subjects with Family History of Alzheimer's Disease. <i>Cerebral Cortex Communications</i> , 2021, 2, tgab051. | 0.7 | 3 |
| 72 | Autonomic mediation in the interdependences between cardiocortical activity time variations and between cardiorespiratory activity time variations in the lizard, <i>Gallotia galloti</i> . <i>Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology</i> , 2008, 149, 11-19. | 0.8 | 2 |

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|----|--|-----|-----------|
| 73 | Closed-loop deep brain stimulation based on a stream-clustering system. Expert Systems With Applications, 2019, 126, 187-199. | 4.4 | 2 |
| 74 | Inferring correlations associated to causal interactions in brain signals using autoregressive models. Scientific Reports, 2019, 9, 17041. | 1.6 | 2 |
| 75 | 582 Inter and Intra-hemispheric Eeg Nonlinear Synchronization in Children with Attention Deficit Hyperactivity Disorder. Pediatric Research, 2010, 68, 298-299. | 1.1 | 1 |
| 76 | Causal Relationships and Network Parameters in Effective Brain Connectivity. , 2013, , . | | 0 |
| 77 | Complex network structure of the creative brain at rest. International Journal of Psychophysiology, 2016, 108, 102. | 0.5 | 0 |
| 78 | P4Ⱦ: FUNCTIONAL CONNECTIVITY HYPOSYNCHRONIZATION IN A GROUP OF COGNITIVELY INTACT OLDER FEMALES: THE USE OF A GENETIC RISK SCORE FOR ALZHEIMER'S DISEASE. Alzheimer's and Dementia, 2019, 15, P1539. | 0.4 | 0 |
| 79 | Synchronization in Brain “ Assessment by Electroencephalographic Signals. Lecture Notes in Computer Science, 2001, , 108-116. | 1.0 | 0 |
| 80 | Topography of Functional Connectivity in Human Multichannel Electroencephalogram during Second Language Processing. Lecture Notes in Computer Science, 2011, , 253-262. | 1.0 | 0 |