

Jose Manuel Ferrández

List of Publications by Year in descending order

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Version: 2024-02-01

125
papers

1,117
citations

516215

16
h-index

476904

29
g-index

147
all docs

147
docs citations

147
times ranked

1158
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 1 | Stress Detection Using Wearable Physiological and Sociometric Sensors. <i>International Journal of Neural Systems</i> , 2017, 27, 1650041. | 3.2 | 132 |
| 2 | Artificial intelligence within the interplay between natural and artificial computation: Advances in data science, trends and applications. <i>Neurocomputing</i> , 2020, 410, 237-270. | 3.5 | 121 |
| 3 | Mental tasks-based brain-robot interface. <i>Robotics and Autonomous Systems</i> , 2010, 58, 1238-1245. | 3.0 | 79 |
| 4 | EEG-Based Detection of Braking Intention Under Different Car Driving Conditions. <i>Frontiers in Neuroinformatics</i> , 2018, 12, 29. | 1.3 | 50 |
| 5 | Population coding in spike trains of simultaneously recorded retinal ganglion cells. <i>Brain Research</i> , 2000, 887, 222-229. | 1.1 | 47 |
| 6 | Parkinson Disease Detection from Speech Articulation Neuromechanics. <i>Frontiers in Neuroinformatics</i> , 2017, 11, 56. | 1.3 | 43 |
| 7 | NeuroLight: A Deep Learning Neural Interface for Cortical Visual Prostheses. <i>International Journal of Neural Systems</i> , 2020, 30, 2050045. | 3.2 | 38 |
| 8 | DATA-MEANS: An open source tool for the classification and management of neural ensemble recordings. <i>Journal of Neuroscience Methods</i> , 2005, 148, 137-146. | 1.3 | 28 |
| 9 | Real-time facial expression recognition using smoothed deep neural network ensemble. <i>Integrated Computer-Aided Engineering</i> , 2020, 28, 97-111. | 2.5 | 28 |
| 10 | Optimization of Real-Time EEG Artifact Removal and Emotion Estimation for Human-Robot Interaction Applications. <i>Frontiers in Computational Neuroscience</i> , 2019, 13, 80. | 1.2 | 26 |
| 11 | Affective Robot Story-Telling Human-Robot Interaction: Exploratory Real-Time Emotion Estimation Analysis Using Facial Expressions and Physiological Signals. <i>IEEE Access</i> , 2020, 8, 134051-134066. | 2.6 | 24 |
| 12 | An efficient and expandable hardware implementation of multilayer cellular neural networks. <i>Neurocomputing</i> , 2013, 114, 54-62. | 3.5 | 22 |
| 13 | FPGA-based architecture for the real-time computation of 2-D convolution with large kernel size. <i>Journal of Systems Architecture</i> , 2012, 58, 277-285. | 2.5 | 21 |
| 14 | Identifying Suitable Brain Regions and Trial Size Segmentation for Positive/Negative Emotion Recognition. <i>International Journal of Neural Systems</i> , 2019, 29, 1850044. | 3.2 | 20 |
| 15 | Real-Time Multi-Modal Estimation of Dynamically Evoked Emotions Using EEG, Heart Rate and Galvanic Skin Response. <i>International Journal of Neural Systems</i> , 2020, 30, 2050013. | 3.2 | 20 |
| 16 | Evaluation of stereo correspondence algorithms and their implementation on FPGA. <i>Journal of Systems Architecture</i> , 2014, 60, 22-31. | 2.5 | 19 |
| 17 | A retinomorph architecture based on discrete-time cellular neural networks using reconfigurable computing. <i>Neurocomputing</i> , 2008, 71, 766-775. | 3.5 | 16 |
| 18 | Automatic Tuning of a Retina Model for a Cortical Visual Neuroprosthesis Using a Multi-Objective Optimization Genetic Algorithm. <i>International Journal of Neural Systems</i> , 2016, 26, 1650021. | 3.2 | 16 |

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|----|---|-----|-----------|
| 19 | Time-frequency representations in speech perception. <i>Neurocomputing</i> , 2009, 72, 820-830. | 3.5 | 15 |
| 20 | Monitoring amyotrophic lateral sclerosis by biomechanical modeling of speech production. <i>Neurocomputing</i> , 2015, 151, 130-138. | 3.5 | 15 |
| 21 | RetinaStudio: A bioinspired framework to encode visual information. <i>Neurocomputing</i> , 2013, 114, 45-53. | 3.5 | 14 |
| 22 | Brain and Body Emotional Responses: Multimodal Approximation for Valence Classification. <i>Sensors</i> , 2020, 20, 313. | 2.1 | 14 |
| 23 | Hand-based Interface for Augmented Reality. , 2007, , . | | 13 |
| 24 | A 3D Convolutional Neural Network to Model Retinal Ganglion Cell's Responses to Light Patterns in Mice. <i>International Journal of Neural Systems</i> , 2018, 28, 1850043. | 3.2 | 13 |
| 25 | FPGA-Based Platform for Image and Video Processing Embedded Systems. , 2007, , . | | 11 |
| 26 | Implementation of a discrete cellular neuron model (DT-CNN) architecture on FPGA. , 2005, , . | | 10 |
| 27 | Neuromorphic detection of speech dynamics. <i>Neurocomputing</i> , 2011, 74, 1191-1202. | 3.5 | 10 |
| 28 | Training biological neural cultures: Towards Hebbian learning. <i>Neurocomputing</i> , 2013, 114, 3-8. | 3.5 | 10 |
| 29 | Real-Time Emotional Recognition for Sociable Robotics Based on Deep Neural Networks Ensemble. <i>Lecture Notes in Computer Science</i> , 2019, , 171-180. | 1.0 | 10 |
| 30 | Cortical Asymmetries and Connectivity Patterns in the Valence Dimension of the Emotional Brain. <i>International Journal of Neural Systems</i> , 2020, 30, 2050021. | 3.2 | 10 |
| 31 | A Customizable Multi-channel Stimulator for Cortical Neuroprosthesis. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , 2007, 2007, 4707-10. | 0.5 | 9 |
| 32 | Effect of salvia <i>Officinalis</i> L. and Rosmarinus <i>Officinalis</i> L. leaves extracts on anxiety and neural activity. <i>Bioinformation</i> , 2019, 15, 172-178. | 0.2 | 9 |
| 33 | FPGA implementation of an augmented reality application for visually impaired people. , 0, , . | | 8 |
| 34 | Simulating the phonological auditory cortex from vowel representation spaces to categories. <i>Neurocomputing</i> , 2013, 114, 63-75. | 3.5 | 8 |
| 35 | On the Automatic Tuning of a Retina Model by Using a Multi-objective Optimization Genetic Algorithm. <i>Lecture Notes in Computer Science</i> , 2015, , 108-118. | 1.0 | 8 |
| 36 | Neural representation of different 3D architectural images: An EEG study. <i>Integrated Computer-Aided Engineering</i> , 2019, 26, 197-205. | 2.5 | 8 |

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|----|--|-----|-----------|
| 37 | Relating Facial Myoelectric Activity to Speech Formants. Lecture Notes in Computer Science, 2017, , 520-530. | 1.0 | 8 |
| 38 | Study of the contrast processing in the early visual system using a neuromorphic retinal architecture. Neurocomputing, 2009, 72, 928-935. | 3.5 | 7 |
| 39 | A client-server architecture for remotely controlling a robot using a closed-loop system with a biological neuroprocessor. Robotics and Autonomous Systems, 2010, 58, 1223-1230. | 3.0 | 7 |
| 40 | Modeling the role of fixational eye movements in real-world scenes. Neurocomputing, 2015, 151, 78-84. | 3.5 | 7 |
| 41 | Application of electroencephalographic techniques to the study of visual impact of renewable energies. Journal of Environmental Management, 2017, 200, 484-489. | 3.8 | 7 |
| 42 | The neural concert of vision. Neurocomputing, 2009, 72, 814-819. | 3.5 | 6 |
| 43 | V-Proportion: A method based on the Voronoi diagram to study spatial relations in neuronal mosaics of the retina. Neurocomputing, 2010, 74, 418-427. | 3.5 | 6 |
| 44 | Skin Color Detection for Real Time Mobile Applications. , 2006, , . | | 5 |
| 45 | A biological neuroprocessor for robotic guidance using a center of area method. Neurocomputing, 2011, 74, 1229-1236. | 3.5 | 5 |
| 46 | Social and collaborative robotics. Robotics and Autonomous Systems, 2013, 61, 659-660. | 3.0 | 5 |
| 47 | Toward an Improvement of the Analysis of Neural Coding. Frontiers in Neuroinformatics, 2017, 11, 77. | 1.3 | 5 |
| 48 | Intelligent robotics and neuroscience. Robotics and Autonomous Systems, 2010, 58, 1221-1222. | 3.0 | 4 |
| 49 | Reprint of: V-Proportion: A method based on the Voronoi diagram to study spatial relations in neuronal mosaics of the retina. Neurocomputing, 2011, 74, 1165-1174. | 3.5 | 4 |
| 50 | Non-stationary Group-Level Connectivity Analysis for Enhanced Interpretability of Oddball Tasks. Frontiers in Neuroscience, 2020, 14, 446. | 1.4 | 4 |
| 51 | Parkinson's Disease Monitoring from Phonation Biomechanics. Lecture Notes in Computer Science, 2015, , 238-248. | 1.0 | 4 |
| 52 | Bio-inspired Systems in Speech Perception: An overview and a study case. , 2006, , . | | 3 |
| 53 | Discrete-Time Cellular Neural Networks in FPGA. , 2007, , . | | 3 |
| 54 | Low rate stochastic strategy for cochlear implants. Neurocomputing, 2009, 72, 936-943. | 3.5 | 3 |

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|----|---|-----|-----------|
| 55 | Searching for semantics in the retinal code. <i>Neurocomputing</i> , 2009, 72, 806-813. | 3.5 | 3 |
| 56 | Intelligent monitoring for people assistance and safety. <i>Expert Systems</i> , 2014, 31, 343-344. | 2.9 | 3 |
| 57 | A practical evaluation of the performance of the Impulse CoDeveloper HLS tool for implementing large-kernel 2-D filters. <i>Journal of Real-Time Image Processing</i> , 2014, 9, 263-279. | 2.2 | 3 |
| 58 | A Bio-inspired Architecture for Cognitive Audio. <i>Lecture Notes in Computer Science</i> , 2007, , 132-142. | 1.0 | 3 |
| 59 | A Hybrid Robotic Control System Using Neuroblastoma Cultures. <i>Lecture Notes in Computer Science</i> , 2010, , 245-253. | 1.0 | 3 |
| 60 | An open-source real-time system for remote robotic control using Neuroblastoma cultures. , 2010, , . | | 2 |
| 61 | New perspectives on the application of expert systems. <i>Expert Systems</i> , 2011, 28, 285-287. | 2.9 | 2 |
| 62 | Implementation of a CNN-based retinomorph model on a high performance reconfigurable computer. <i>Neurocomputing</i> , 2011, 74, 1290-1297. | 3.5 | 2 |
| 63 | Bio-inspired population-based meta-heuristics for problem solving. <i>Natural Computing</i> , 2017, 16, 187-188. | 1.8 | 2 |
| 64 | Towards a Deep Learning Model of Retina: Retinal Neural Encoding of Color Flash Patterns. <i>Lecture Notes in Computer Science</i> , 2017, , 464-472. | 1.0 | 2 |
| 65 | Setting the Parameters for an Accurate EEG (Electroencephalography)-Based Emotion Recognition System. <i>Lecture Notes in Computer Science</i> , 2017, , 265-273. | 1.0 | 2 |
| 66 | Biologically inspired vision systems in robotics. <i>International Journal of Advanced Robotic Systems</i> , 2017, 14, 172988141774594. | 1.3 | 2 |
| 67 | Application of Koniocortex-Like Networks to Cardiac Arrhythmias Classification. <i>Lecture Notes in Computer Science</i> , 2019, , 264-273. | 1.0 | 2 |
| 68 | Model and hardware emulation of the first synapse of the retina using Discrete-Time Cellular Neural Networks. , 2009, , . | | 1 |
| 69 | Neural computation with cellular cultures. <i>Natural Computing</i> , 2012, 11, 175-183. | 1.8 | 1 |
| 70 | Solving problems with natural computing. <i>Natural Computing</i> , 2012, 11, 129-130. | 1.8 | 1 |
| 71 | Response calibration in neuroblastoma cultures over multielectrode array. <i>Neurocomputing</i> , 2012, 75, 98-105. | 3.5 | 1 |
| 72 | Induced functional connectivity in hippocampal cultures using Hebbian electrical stimulation. <i>Neurocomputing</i> , 2015, 151, 4-10. | 3.5 | 1 |

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| 73 | A scalable CNN architecture and its application to short exposure stellar images processing on a HPRC. <i>Neurocomputing</i> , 2015, 151, 91-100. | 3.5 | 1 |
| 74 | Intelligence in educational environments. <i>Expert Systems</i> , 2017, 34, e12216. | 2.9 | 1 |
| 75 | Evaluating Instability on Phonation in Parkinson's Disease and Aging Speech. <i>Lecture Notes in Computer Science</i> , 2019, , 340-351. | 1.0 | 1 |
| 76 | NeuroLight Alpha: Interfacing Computational Neural Models for Stimulus Modulation in Cortical Visual Neuroprostheses. <i>Lecture Notes in Computer Science</i> , 2019, , 108-119. | 1.0 | 1 |
| 77 | Group Differences in Time-Frequency Relevant Patterns for User-Independent BCI Applications. <i>Lecture Notes in Computer Science</i> , 2019, , 138-145. | 1.0 | 1 |
| 78 | On the Use of Lateralization for Lightweight and Accurate Methodology for EEG Real Time Emotion Estimation Using Gaussian-Process Classifier. <i>Lecture Notes in Computer Science</i> , 2019, , 191-201. | 1.0 | 1 |
| 79 | Brushstrokes of the Emotional Brain: Cortical Asymmetries for Valence Dimension. <i>Lecture Notes in Computer Science</i> , 2019, , 232-243. | 1.0 | 1 |
| 80 | Autonomic Modulation During a Cognitive Task Using a Wearable Device. <i>Lecture Notes in Computer Science</i> , 2019, , 69-77. | 1.0 | 1 |
| 81 | Exploring the Physiological Basis of Emotional HRI Using a BCI Interface. <i>Lecture Notes in Computer Science</i> , 2017, , 274-285. | 1.0 | 1 |
| 82 | Detection of Speech Dynamics by Neuromorphic Units. <i>Lecture Notes in Computer Science</i> , 2009, , 67-78. | 1.0 | 1 |
| 83 | Neuromorphic Detection of Vowel Representation Spaces. <i>Lecture Notes in Computer Science</i> , 2011, , 1-11. | 1.0 | 1 |
| 84 | Neural Spike Activation in Hippocampal Cultures Using Hebbian Electrical Stimulation. <i>Lecture Notes in Computer Science</i> , 2013, , 37-47. | 1.0 | 1 |
| 85 | Temporal Dynamics of Human Emotions: An Study Combining Images and Music. <i>Lecture Notes in Computer Science</i> , 2017, , 245-253. | 1.0 | 1 |
| 86 | Autism Spectrum Disorder (ASD): Emotional Intervention Protocol. <i>Lecture Notes in Computer Science</i> , 2022, , 310-322. | 1.0 | 1 |
| 87 | EEG Signals in Mental Fatigue Detection: A Comparing Study of Machine Learning Technics VS Deep Learning. <i>Lecture Notes in Computer Science</i> , 2022, , 625-633. | 1.0 | 1 |
| 88 | FPGA implementation of an area-time efficient FIR filter core using a self-clocked approach. , 2005, , . | | 0 |
| 89 | Development of a Cortical Visual Neuroprostheses for the Blind. , 2006, , . | | 0 |
| 90 | Neural computation as adaptive association process in cortical sensorial maps. <i>Natural Computing</i> , 2009, 8, 739-755. | 1.8 | 0 |

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| 91 | Non-conventional computing paradigms. Natural Computing, 2009, 8, 643-644. | 1.8 | 0 |
| 92 | Acceleration of a DWT-Based Algorithm for Short Exposure Stellar Images Processing on a HPRC Platform. , 2010, , . | | 0 |
| 93 | From phenomenological data and sensations to cognition. Neurocomputing, 2011, 74, 1157-1158. | 3.5 | 0 |
| 94 | Novel vehicle for exploring networks dynamics in excitable tissue. Neurocomputing, 2013, 114, 9-14. | 3.5 | 0 |
| 95 | Searching for the interplay between neuroscience and computation. Neurocomputing, 2013, 114, 1-2. | 3.5 | 0 |
| 96 | Non conventional computing and constraint optimization. Natural Computing, 2014, 13, 129-130. | 1.8 | 0 |
| 97 | IWINAC 2013 special section: editorial on intelligent systems for neural disorders and emotional state identification. Expert Systems, 2015, 32, 674-675. | 2.9 | 0 |
| 98 | FPGA Translation of Functional Hippocampal Cultures Structures Using Cellular Neural Networks. Lecture Notes in Computer Science, 2015, , 228-237. | 1.0 | 0 |
| 99 | Development of a cortical visual neuroprosthesis for the blind: Replacing the role of the retina. , 2015, , . | | 0 |
| 100 | Introduction. International Journal of Neural Systems, 2016, 26, 1602001. | 3.2 | 0 |
| 101 | Introduction. International Journal of Neural Systems, 2019, 29, 1802001. | 3.2 | 0 |
| 102 | Assessing an Application of Spontaneous Stressed Speech - Emotions Portal. Lecture Notes in Computer Science, 2019, , 149-160. | 1.0 | 0 |
| 103 | Frequency variation analysis in neuronal cultures for stimulus response characterization. Neural Computing and Applications, 2020, 32, 5027-5032. | 3.2 | 0 |
| 104 | Introduction. International Journal of Neural Systems, 2020, 30, 2002001. | 3.2 | 0 |
| 105 | Neural Computation links Neuroscience: a synergistic approach. Neural Computing and Applications, 2020, 32, 13173-13174. | 3.2 | 0 |
| 106 | IJNS: 30 Years of Breakthrough Multidisciplinarity, Rigor, and Excellence in the Knowledge Limits. International Journal of Neural Systems, 2020, 30, 2003001. | 3.2 | 0 |
| 107 | Iwinac 2017: Assistive intelligence for the elderly. Expert Systems, 2020, 37, e12535. | 2.9 | 0 |
| 108 | Bioinspired Auditory Model for Vowel Recognition. Electronics (Switzerland), 2021, 10, 2304. | 1.8 | 0 |

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|-----|--|-----|-----------|
| 109 | Spatio-temporal Computation with Neural Sensorial Maps. Lecture Notes in Computer Science, 2009, , 79-86. | 1.0 | 0 |
| 110 | Activity Modulation in Human Neuroblastoma Cultured Cells: Towards a Biological Neuroprocessor. Lecture Notes in Computer Science, 2009, , 142-154. | 1.0 | 0 |
| 111 | Analysis of Retinal Ganglion Cells Population Responses Using Information Theory and Artificial Neural Networks: Towards Functional Cell Identification. Lecture Notes in Computer Science, 2009, , 121-131. | 1.0 | 0 |
| 112 | Modeling Short-Time Parsing of Speech Features in Neocortical Structures. Lecture Notes in Computer Science, 2010, , 159-168. | 1.0 | 0 |
| 113 | An Optimized Framework to Model Vertebrate Retinas. Lecture Notes in Computer Science, 2011, , 185-194. | 1.0 | 0 |
| 114 | An Expandable Hardware Platform for Implementation of CNN-Based Applications. Lecture Notes in Computer Science, 2011, , 195-204. | 1.0 | 0 |
| 115 | Monitoring Neurological Disease in Phonation. Lecture Notes in Computer Science, 2011, , 136-147. | 1.0 | 0 |
| 116 | Tools for Controlled Experiments and Calibration on Living Tissues Cultures. Lecture Notes in Computer Science, 2011, , 472-481. | 1.0 | 0 |
| 117 | Long Term Modulation and Control of Neuronal Firing in Excitable Tissue Using Optogenetics. Lecture Notes in Computer Science, 2011, , 266-273. | 1.0 | 0 |
| 118 | High-Level Hardware Description of a CNN-Based Algorithm for Short Exposure Stellar Images Processing on a HPRC. Lecture Notes in Computer Science, 2013, , 375-384. | 1.0 | 0 |
| 119 | Characterization of Speech from Amyotrophic Lateral Sclerosis by Neuromorphic Processing. Lecture Notes in Computer Science, 2013, , 212-224. | 1.0 | 0 |
| 120 | Neural Recognition of Real and Computer-Designed Architectural Images. Lecture Notes in Computer Science, 2015, , 451-458. | 1.0 | 0 |
| 121 | Vowel Articulation Distortion in Parkinson's Disease. Lecture Notes in Computer Science, 2017, , 21-31. | 1.0 | 0 |
| 122 | Spatial Resolution of EEG Source Reconstruction in Assessing Brain Connectivity Analysis. Lecture Notes in Computer Science, 2017, , 77-86. | 1.0 | 0 |
| 123 | Distinguishing Aging Clusters and Mobile Devices by Hand-Wrist Articulation: A Case of Study. Lecture Notes in Computer Science, 2019, , 11-21. | 1.0 | 0 |
| 124 | Neuromorphic Speech Processing. , 0, , 447-473. | | 0 |
| 125 | <sc>WINAC</sc>'2019: Intelligent systems for cognitive training and assessment. Expert Systems, 2022, 39, . | 2.9 | 0 |