Zoran Nenadic

List of Publications by Year
in descending order

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81	2,061	304602 22	265120 42
papers	citations	h-index	g-index

82	82	82	2069
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Spike Detection Using the Continuous Wavelet Transform. IEEE Transactions on Biomedical Engineering, 2005, 52, 74-87.	2.5	310
2	Brain-computer interface controlled robotic gait orthosis. Journal of NeuroEngineering and Rehabilitation, 2013, 10, 111.	2.4	135
3	Brain-Computer Interface Controlled Functional Electrical Stimulation System for Ankle Movement. Journal of NeuroEngineering and Rehabilitation, 2011, 8, 49.	2.4	101
4	Information Discriminant Analysis: Feature Extraction with an Information-Theoretic Objective. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2007, 29, 1394-1407.	9.7	89
5	Semi-Chronic Motorized Microdrive and Control Algorithm for Autonomously Isolating and Maintaining Optimal Extracellular Action Potentials. Journal of Neurophysiology, 2005, 93, 570-579.	0.9	85
6	Extracting kinetic information from human motor cortical signals. NeuroImage, 2014, 101, 695-703.	2.1	84
7	The feasibility of a brain-computer interface functional electrical stimulation system for the restoration of overground walking after paraplegia. Journal of NeuroEngineering and Rehabilitation, 2015, 12, 80.	2.4	80
8	Operation of a brain-computer interface walking simulator for individuals with spinal cord injury. Journal of NeuroEngineering and Rehabilitation, 2013, 10, 77.	2.4	68
9	An efficient discriminant-based solution for small sample size problem. Pattern Recognition, 2009, 42, 857-866.	5.1	67
10	A durable, low-cost electrogoniometer for dynamic measurement of joint trajectories. Medical Engineering and Physics, 2011, 33, 546-552.	0.8	49
11	Modeling and estimation problems in the turtle visual cortex. IEEE Transactions on Biomedical Engineering, 2002, 49, 753-762.	2.5	47
12	Electroencephalography-based endogenous brainâ€“computer interface for online communication with a completely locked-in patient. Journal of NeuroEngineering and Rehabilitation, 2019, 16, 18.	2.4	47
13	Propagating waves in visual cortex: a large-scale model of turtle visual cortex. Journal of Computational Neuroscience, 2003, 14, 161-184.	0.6	46
14	Self-paced brainâ€“computer interface control of ambulation in a virtual reality environment. Journal of Neural Engineering, 2012, 9, 056016.	1.8	44
15	Electrocorticographic Encoding of Human Gait in the Leg Primary Motor Cortex. Cerebral Cortex, 2018, 28, 2752-2762.	1.6	44
16	Brain-controlled functional electrical stimulation therapy for gait rehabilitation after stroke: a safety study. Journal of NeuroEngineering and Rehabilitation, 2015, 12, 57.	2.4	43
17	Comparison of decoding resolution of standard and high-density electrocorticogram electrodes. Journal of Neural Engineering, 2016, 13, 026016.	1.8	42
18	High Precision and Fast Functional Mapping of Cortical Circuitry Through a Novel Combination of Voltage Sensitive Dye Imaging and Laser Scanning Photostimulation. Journal of Neurophysiology, 2010, 103, 2301-2312.	0.9	41

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19	Approximate information discriminant analysis: A computationally simple heteroscedastic feature extraction technique. Pattern Recognition, 2008, 41, 1548-1557.	5.1	40
20	Brain-computer interface controlled functional electrical stimulation device for foot drop due to stroke. , 2012, 2012, 6414-7.		36
21	Performance Assessment of a Custom, Portable, and Low-Cost Brainâ€“Computer Interface Platform. IEEE Transactions on Biomedical Engineering, 2017, 64, 2313-2320.	2.5	34
22	A control algorithm for autonomous optimization of extracellular recordings. IEEE Transactions on Biomedical Engineering, 2006, 53, 941-955.	2.5	31
23	Novel Use of Matched Filtering for Synaptic Event Detection and Extraction. PLoS ONE, 2010, 5, e15517.	1.1	26
24	A Classwise PCA-based Recognition of Neural Data for Brain-Computer Interfaces. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 6520-3.	0.5	25
25	A CMOS Dual-Mode Brain-Computer Interface Chipset With 2-mV Precision Time-Based Charge Balancing and Stimulation-Side Artifact Suppression. IEEE Journal of Solid-State Circuits, 2022, 57, 1824-1840.	3.5	24
26	CMOS Ultralow Power Brain Signal Acquisition Front-Ends: Design and Human Testing. IEEE Transactions on Biomedical Circuits and Systems, 2017, 11, 1111-1122.	2.7	23
27	A CMOS MedRadio Transceiver With Supply-Modulated Power Saving Technique for an Implantable Brainâ€“Machine Interface System. IEEE Journal of Solid-State Circuits, 2019, 54, 1541-1552.	3.5	23
28	Projection Versus Prewhitening for EEG Interference Suppression. IEEE Transactions on Biomedical Engineering, 2012, 59, 1329-1338.	2.5	22
29	Performance Assessment of a Brainâ€“Computer Interface Driven Hand Orthosis. Annals of Biomedical Engineering, 2014, 42, 2095-2105.	1.3	22
30	Robust Unsupervised Detection of Action Potentials With Probabilistic Models. IEEE Transactions on Biomedical Engineering, 2008, 55, 1344-1354.	2.5	20
31	Mental State Estimation for Brain--Computer Interfaces. IEEE Transactions on Biomedical Engineering, 2009, 56, 2114-2122.	2.5	19
32	Noninvasive brain-computer interface driven hand orthosis. , 2011, 2011, 5786-9.		18
33	Characterization of electrocorticogram high-gamma signal in response to varying upper extremity movement velocity. Brain Structure and Function, 2017, 222, 3705-3748.	1.2	18
34	An Energy-Efficient CMOS Dual-Mode Array Architecture for High-Density ECoG-Based Brain-Machine Interfaces. IEEE Transactions on Biomedical Circuits and Systems, 2020, 14, 332-342.	2.7	16
35	Efficient Dipole Parameter Estimation in EEG Systems With Near-ML Performance. IEEE Transactions on Biomedical Engineering, 2012, 59, 1339-1348.	2.5	15
36	A co-registration approach for electrocorticogram electrode localization using post-implantation MRI and CT of the head. , 2013, , .		15

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37	Laminar circuit organization and response modulation in mouse visual cortex. Frontiers in Neural Circuits, 2012, 6, 70.	1.4	14
38	Brain-computer interface driven functional electrical stimulation system for overground walking in spinal cord injury participant. , 2014, 2014, 1238-42.		14
39	Brain-controlled functional electrical stimulation for lower-limb motor recovery in stroke survivors. , 2014, 2014, 1247-50.		13
40	A benchtop system to assess the feasibility of a fully independent and implantable brain-machine interface. Journal of Neural Engineering, 2019, 16, 066043.	1.8	13
41	Accurate detection of low signal-to-noise ratio neuronal calcium transient waves using a matched filter. Journal of Neuroscience Methods, 2016, 259, 1-12.	1.3	12
42	An Efficient Algorithm for Current Source Localization with Tetrodes. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 1282-5.	0.5	11
43	A small, portable, battery-powered brain-computer interface system for motor rehabilitation. , 2016, 2016, 2776-2779.		11
44	A 64-channel ultra-low power bioelectric signal acquisition system for brain-computer interface. , 2015, , .		9
45	Spatiotemporal dynamics in a model of turtle visual cortex. Neurocomputing, 2000, 32-33, 479-486.	3.5	7
46	A CMOS inductorless MedRadio OOK transceiver with a 42 Î¼W event-driven supply-modulated RX and a 14% efficiency TX for medical implants. , 2018, , .		7
47	Thermal Analysis of a Skull Implant in Brain-Computer Interfaces. , 2020, 2020, 3066-3069.		7
48	State and trajectory decoding of upper extremity movements from electrocorticogram. , 2013, , .		6
49	Sensitivity and specificity of upper extremity movements decoded from electrocorticogram. , 2013, 2013, 5618-21.		6
50	Characterization of Stimulation Artifact Behavior in Simultaneous Electrocorticography Grid Stimulation and Recording. , 2018, 2018, 4748-4751.		6
51	Dipole Cancellation as an Artifact Suppression Technique in Simultaneous Electrocorticography Stimulation and Recording. , 2019, , .		6
52	Optimal artifact suppression in simultaneous electrocorticography stimulation and recording for bi-directional brain-computer interface applications. Journal of Neural Engineering, 2020, 17, 026038.	1.8	6
53	A Comparative Analysis of Coronary and Aortic Flow Waveforms. Annals of Biomedical Engineering, 2008, 36, 933-946.	1.3	5
54	Structure of brain functional networks. , 2009, 2009, 4166-70.		5

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55	Subspace-Based Suppression of Cortical Stimulation Artifacts. , 2018, 2018, 2426-2429.		5
56	Analysis of Large-Scale Brain Data for Brain-Computer Interfaces. , 2006, 2006, 5731-4.		4
57	The accuracy and precision of signal source localization with tetrodes. , 2013, 2013, 531-4.		4
58	Electrocorticogram encoding of upper extremity movement trajectories. , 2013, , .		4
59	Electrocorticogram encoding of upper extremity movement duration. , 2014, 2014, 1243-6.		4
60	A novel framework for feature extraction in multi-sensor action potential sorting. Journal of Neuroscience Methods, 2015, 253, 262-271.	1.3	4
61	A Prototype of a Fully-Implantable Charge-Balanced Artificial Sensory Stimulator for Bi-directional Brain-Computer-Interface (BD-BCI). , 2020, 2020, 3083-3085.		4
62	An Analysis of CMRR Degradation in Multi-Channel Biosignal Recording Systems. IEEE Transactions on Circuits and Systems II: Express Briefs, 2021, 68, 151-155.	2.2	4
63	Signal source localization with tetrodes: Experimental verification. , 2011, 2011, 67-70.		3
64	BCI-Based Neuroprostheses and Physiotherapies for Stroke Motor Rehabilitation. , 2016, , 617-627.		3
65	Source location as a feature for the classification of multi-sensor extracellular action potentials. , 2013, , .		2
66	Wavelet-approximated generalized matched filter for the detection of multisensor extracellular action potentials. , 2013, , .		2
67	Automated detection and analysis of depolarization events in human cardiomyocytes using MaDEC. Computers in Biology and Medicine, 2016, 75, 109-117.	3.9	2
68	Feasibility of an ultra-low power digital signal processor platform as a basis for a fully implantable brain-computer interface system. , 2016, 2016, 4491-4494.		2
69	Electrocorticographic Activity of the Brain During Micturition. , 2018, 2018, 3622-3625.		2
70	Control of arm movement using population of neurons. Mathematical and Computer Modelling, 2002, 35, 1261-1269.	2.0	1
71	Encoding and decoding of analog signals with a population of neurons. Mathematical and Computer Modelling, 2004, 39, 181-196.	2.0	1
72	A supervised multi-sensor matched filter for the detection of extracellular action potentials. , 2014, 2014, 5996-9.		1

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73	A cortical activity localization approach for decoding finger movements from human electrocorticogram signal. , 2015, , .		1
74	Brainâ€“computer interfaces for human gait restoration. Control Theory and Technology, 2021, 19, 516-528.	1.0	1
75	Matched subspace detector based feature extraction for sorting of multi-sensor action potentials. , 2011, 2011, 3704-7.		0
76	Intrinsic dimensionality of extracellular action potentials. , 2014, 2014, 3228-31.		0
77	A Low-Cost, Fully Programmable, Battery Powered Direct Cortical Electrical Stimulator1. Journal of Medical Devices, Transactions of the ASME, 2016, 10, .	0.4	0
78	Understanding How The Brain Controls Movement In Humans. , 2018, , .		0
79	Pre-whitening and Null Projection as an Artifact Suppression Method for Electrocorticography Stimulation in Bi-Directional Brain Computer Interfaces. , 2020, 2020, 3493-3496.		0
80	A Fully-Integrated 1ÂµW/Channel Dual-Mode Neural Data Acquisition System for Implantable Brain-Machine Interfaces. , 2021, 2021, 5780-5783.		0
81	Analysis of Large-Scale Brain Data for Brain-Computer Interfaces. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	0