Stefano Vassanelli

List of Publications by Year
in descending order

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88	2,797	318942	214428
papers	citations	23 h-index	50 g-index

94	94	94	3857
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Accelerated Aging Characterizes the Early Stage of Alzheimerâ€™s Disease. Cells, 2022, 11, 238.	1.8	9
2	Increased fMRI connectivity upon chemogenetic inhibition of the mouse prefrontal cortex. Nature Communications, 2022, 13, 1056.	5.8	45
3	Classification of Whisker Deflections From Evoked Responses in the Somatosensory Barrel Cortex With Spiking Neural Networks. Frontiers in Neuroscience, 2022, 16, 838054.	1.4	3
4	Understanding the Effects of Anesthesia on Cortical Electrophysiological Recordings: A Scoping Review. International Journal of Molecular Sciences, 2021, 22, 1286.	1.8	29
5	FPGA Design Integration of a 32-Microelectrodes Low-Latency Spike Detector in a Commercial System for Intracortical Recordings. Digital, 2021, 1, 34-53.	1.1	7
6	Comparison of Sneo-Based Neural Spike Detection Algorithms for Implantable Multi-Transistor Array Biosensors. Electronics (Switzerland), 2021, 10, 410.	1.8	9
7	In situ electroporation of mammalian cells through SiO2 thin film capacitive microelectrodes. Scientific Reports, 2021, 11, 15126.	1.6	6
8	Neuronal Avalanches Across the Rat Somatosensory Barrel Cortex and the Effect of Single Whisker Stimulation. Frontiers in Systems Neuroscience, 2021, 15, 709677.	1.2	15
9	Simultaneous Two-Photon Voltage or Calcium Imaging and Multi-Channel Local Field Potential Recordings in Barrel Cortex of Awake and Anesthetized Mice. Frontiers in Neuroscience, 2021, 15, 741279.	1.4	6
10	Dampened Slow Oscillation Connectivity Anticipates Amyloid Deposition in the PS2APP Mouse Model of Alzheimerâ€™s Disease. Cells, 2020, 9, 54.	1.8	17
11	Plasticity and Adaptation in Neuromorphic Biohybrid Systems. IScience, 2020, 23, 101589.	1.9	26
12	Evaluation of In Vivo Spike Detection Algorithms for Implantable MTA Brainâ€”Silicon Interfaces. Journal of Low Power Electronics and Applications, 2020, 10, 26.	1.3	6
13	Electromagnetic field affects the voltage-dependent potassium channel Kv1.3. Electromagnetic Biology and Medicine, 2020, 39, 316-322.	0.7	6
14	Memristive synapses connect brain and silicon spiking neurons. Scientific Reports, 2020, 10, 2590.	1.6	59
15	Towards Automated Processing and Analysis of Neuronal Big Data Acquired Using High-Resolution Brain-Chip Interfaces. Brain Informatics and Health, 2020, , 175-191.	0.1	1
16	Real-Time Neural (RT-Neu) Spikes Imaging by a 9375 sample/(sec pixel) 32Ã—32 pixels Electrolyte-Oxide-Semiconductor Biosensor. , 2019, , .		0
17	Open-Source Tools for Processing and Analysis of In Vitro Extracellular Neuronal Signals. Advances in Neurobiology, 2019, 22, 233-250.	1.3	8
18	A 10 MSample/Sec Digital Neural Spike Detection for a 1024 Pixels Multi Transistor Array Sensor. , 2019, , .		1

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19	Applications of Deep Learning and Reinforcement Learning to Biological Data. IEEE Transactions on Neural Networks and Learning Systems, 2018, 29, 2063-2079.	7.2	596
20	Sub 100 nW Volatile Nano-Metal-Oxide Memristor as Synaptic-Like Encoder of Neuronal Spikes. IEEE Transactions on Biomedical Circuits and Systems, 2018, 12, 351-359.	2.7	19
21	Embedded Classification of Local Field Potentials Recorded from Rat Barrel Cortex with Implanted Multi-Electrode Array. , 2018, , .		7
22	Neural Spike Digital Detector on FPGA. Electronics (Switzerland), 2018, 7, 392.	1.8	11
23	Rat Cortical Layers Classification extracting Evoked Local Field Potential Images with Implanted Multi-Electrode Sensor. , 2018, , .		3
24	Real-time digital implementation of a principal component analysis algorithm for neurons spike detection. , 2018, , .		1
25	Implantable neural interfaces. , 2018, , .		1
26	Intranasal Oxytocin and Vasopressin Modulate Divergent Brainwide Functional Substrates. Neuropsychopharmacology, 2017, 42, 1420-1434.	2.8	35
27	Algorithm and software to automatically identify latency and amplitude features of local field potentials recorded in electrophysiological investigation. Source Code for Biology and Medicine, 2017, 12, 3.	1.7	2
28	Early hippocampal hyperexcitability in PS2APP mice: role of mutant PS2 and APP. Neurobiology of Aging, 2017, 50, 64-76.	1.5	28
29	Towards high-resolution brain-chip interface and automated analysis of multichannel neuronal signals. , 2017, , .		7
30	Activity dependent structural plasticity in neuromorphic systems. , 2017, , .		3
31	Neural spikes digital detector/sorting on FPGA. , 2017, , .		6
32	Differential Modulation of Excitatory and Inhibitory Neurons during Periodic Stimulation. Frontiers in Neuroscience, 2016, 10, 62.	1.4	26
33	Processing and Analysis of Multichannel Extracellular Neuronal Signals: State-of-the-Art and Challenges. Frontiers in Neuroscience, 2016, 10, 248.	1.4	45
34	Trends and Challenges in Neuroengineering: Toward â€œIntelligentâ€•Neuroprostheses through Brain-â€œBrain Inspired Systemsâ€•Communication. Frontiers in Neuroscience, 2016, 10, 438.	1.4	62
35	A tunable local field potentials computer simulator to assess minimal requirements for phaseâ€“amplitude cross-frequency-coupling estimation. Network: Computation in Neural Systems, 2016, 27, 268-288.	2.2	0
36	Neural tissue and brain interfacing CMOS devices â€” An introduction to state-of-the-art, current and future challenges. , 2016, , .		15

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37	Real-time encoding and compression of neuronal spikes by metal-oxide memristors. Nature Communications, 2016, 7, 12805.	5.8	141
38	An Automated Method for Characterization of Evoked Single-Trial Local Field Potentials Recorded from Rat Barrel Cortex Under Mechanical Whisker Stimulation. Cognitive Computation, 2016, 8, 935-945.	3.6	23
39	Imaging local field potentials in the rat barrel cortex. , 2015, , .		2
40	A Si-chip-based system for highly parallel electroporation of cells. , 2015, , .		1
41	Event-based softcore processor in a biohybrid setup applied to structural plasticity. , 2015, , .		11
42	A software-based platform for multichannel electrophysiological data acquisition. , 2015, , .		1
43	Anesthesia effect on single local field potentials variability in rat barrel cortex: Preliminary results. , 2015, 2015, 4721-4.		6
44	Automated analysis of local field potentials evoked by mechanical whisker stimulation in rat barrel cortex. , 2015, 2015, 1520-3.		0
45	CMOS-compatible purely capacitive interfaces for high-density in-vivo recording from neural tissue. , 2015, , .		14
46	Three dimensional ALD of TiO<inf>2</inf> for in-vivo biomedical sensor applications. , 2015, , .		7
47	The role of miR-29 family members in malignant hematopoiesis. Biomedical Papers of the Medical Faculty of the University Palacký, Olomouc, Czechoslovakia, 2014, 158, 489-501.	0.2	25
48	Multielectrode and Multitransistor Arrays for In Vivo Recording. , 2014, , 239-267.		13
49	Mechanisms underlying the attachment and spreading of human osteoblasts: From transient interactions to focal adhesions on vitronectin-grafted bioactive surfaces. Acta Biomaterialia, 2013, 9, 6105-6115.	4.1	41
50	Sodium channel Î²2 subunit promotes filopodia-like processes and expansion of the dendritic tree in developing rat hippocampal neurons. Frontiers in Cellular Neuroscience, 2013, 7, 2.	1.8	11
51	CyberRat Probes: High-Resolution Biohybrid Devices for Probing the Brain. Lecture Notes in Computer Science, 2012, , 274-285.	1.0	2
52	Na+ channels at postsynaptic muscle membrane affects synaptic transmission at Neuromuscular Junction: A simulation study. , 2012, 2012, 3616-9.		3
53	An automated method to remove artifacts induced by microstimulation in local field potentials recorded from rat somatosensory cortex. , 2012, , .		12
54	A Matlab based tool for cortical layer activation order detection through latency calculation in local field potentials recorded from rat barrel cortex by brain-chip interface. , 2012, , .		5

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55	On the Way to Large-Scale and High-Resolution Brain-Chip Interfacing. Cognitive Computation, 2012, 4, 71-81.	3.6	32
56	SigMate: A Matlab-based automated tool for extracellular neuronal signal processing and analysis. Journal of Neuroscience Methods, 2012, 207, 97-112.	1.3	40
57	Single LFP Sorting for High-Resolution Brain-Chip Interfacing. Lecture Notes in Computer Science, 2012, , 329-337.	1.0	5
58	Title is missing!. Journal of Medical and Biological Engineering, 2012, 32, 397.	1.0	13
59	Self-gating of sodium channels at neuromuscular junction. , 2011, , .		3
60	SigMate: A comprehensive software package for extracellular neuronal signal processing and analysis. , 2011, , .		10
61	High resolution cortical imaging using electrolyte-(metal)-oxide-semiconductor field effect transistors. , 2011, , .		8
62	An automated method to determine angular preferentiality using LFPs recorded from rat barrel cortex by brain-chip interface under mechanical whisker stimulation. , 2011, 2011, 2307-10.		6
63	Electrochemical impedance spectroscopy study of the cells adhesion over microelectrodes array. , 2011, , .		1
64	Brain-Chip Interfaces: The Present and The Future. Procedia Computer Science, 2011, 7, 61-64.	1.2	14
65	The modulation of myogenic cells differentiation using a semiconductor-muscle junction. Biomaterials, 2011, 32, 4228-4237.	5.7	3
66	An automated method for detection of layer activation order in information processing pathway of rat barrel cortex under mechanical whisker stimulation. Journal of Neuroscience Methods, 2011, 196, 141-150.	1.3	25
67	Stimulation of Ca2+ signals in neurons by electrically coupled electrolyte-oxide-semiconductor capacitors. Journal of Neuroscience Methods, 2011, 198, 1-7.	1.3	8
68	Sodium channels' kinetics under self-gating condition at neuromuscular junction. , 2011, , .		2
69	An automated method for clustering single sweep local field potentials recorded from rat barrel cortex. , 2011, , .		4
70	Effect of self-gating on action potential firing at neuromuscular junction. , 2011, 2011, 4082-5.		1
71	Automatic detection of layer activation order in information processing pathways of rat barrel cortex under mechanical whisker stimulation. , 2010, 2010, 6095-8.		11
72	Mechanical and Electrophysiological Properties of the Sarcolemma of Muscle Fibers in Two Murine Models of Muscle Dystrophy: Col6a1<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mo>â^'</mml:mo><mml:mo>/</mml:mo><mml:mo>â^'</mml Mdx. Journal of Biomedicine and Biotechnology, 2010, 2010, 1-13.	3.0	20

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73	SigMate: A MATLAB-based neuronal signal processing tool. , 2010, 2010, 1352-5.		20
74	Processing of neuronal signals recorded by brain-chip interface from surface of the S1 brain cortex. , 2010, , .		3
75	A contour based automatic method to classify Local Field Potentials recorded from rat barrel cortex. , 2010, , .		10
76	A High Resolution Bi-Directional Communication through a Brain-Chip Interface. , 2009, , .		10
77	Space and time-resolved gene expression experiments on cultured mammalian cells by a single-cell electroporation microarray. New Biotechnology, 2008, 25, 55-67.	2.4	25
78	Increased spontaneous activity of a network of hippocampal neurons in culture caused by suppression of inhibitory potentials mediated by anti-gad antibodies. Autoimmunity, 2008, 41, 66-73.	1.2	43
79	A potential role for the vanilloid receptor TRPV1 in the therapeutic effect of curcumin in dinitrobenzene sulphonic acid-induced colitis in mice. Neurogastroenterology and Motility, 2007, 19, 668-674.	1.6	60
80	Peculiar labeling of cultured hippocampal neurons by different sera harboring anti-glutamic acid decarboxylase autoantibodies (GAD-Ab). Experimental Neurology, 2006, 202, 514-518.	2.0	19
81	Potassium channel gating in adhesion: from an oocyte?silicon to a neuron?astrocyte adhesion contact. European Biophysics Journal, 2005, 34, 113-126.	1.2	1
82	Increase in cytosolic Ca2+ induced by elevation of extracellular Ca2+ in skeletal myogenic cells. American Journal of Physiology - Cell Physiology, 2003, 284, C969-C976.	2.1	22
83	Dynamic localization and clustering of dendritic Kv2.1 voltage-dependent potassium channels in developing hippocampal neurons. Neuroscience, 2001, 108, 69-81.	1.1	108
84	Transistor Probes Local Potassium Conductances in the Adhesion Region of Cultured Rat Hippocampal Neurons. Journal of Neuroscience, 1999, 19, 6767-6773.	1.7	66
85	Transistor records of excitable neurons from rat brain. Applied Physics A: Materials Science and Processing, 1998, 66, 459-463.	1.1	69
86	Neurons from rat brain coupled to transistors. Applied Physics A: Materials Science and Processing, 1997, 65, 85-88.	1.1	32
87	On the Mechanism of Fatty Acid-induced Proton Transport by Mitochondrial Uncoupling Protein. Journal of Biological Chemistry, 1996, 271, 2615-2620.	1.6	292
88	Modulation of the mitochondrial permeability transition pore. Effect of protons and divalent cations. Journal of Biological Chemistry, 1992, 267, 2934-9.	1.6	342