

Stephen P Deweerth

List of Publications by Year in descending order

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42
papers

929
citations

623734

14
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454955

30
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42
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42
docs citations

42
times ranked

1200
citing authors

#	ARTICLE	IF	CITATIONS
1	A PDMS-Based Integrated Stretchable Microelectrode Array (isMEA) for Neural and Muscular Surface Interfacing. IEEE Transactions on Biomedical Circuits and Systems, 2013, 7, 1-10.	4.0	115
2	A Multiconductance Silicon Neuron With Biologically Matched Dynamics. IEEE Transactions on Biomedical Engineering, 2004, 51, 342-354.	4.2	106
3	A lithographically-patterned, elastic multi-electrode array for surface stimulation of the spinal cord. Biomedical Microdevices, 2008, 10, 259-269.	2.8	87
4	Novel Nonlinear Elastic Actuators for Passively Controlling Robotic Joint Compliance. Journal of Mechanical Design, Transactions of the ASME, 2007, 129, 406-412.	2.9	86
5	Stimulus-Artifact Elimination in a Multi-Electrode System. IEEE Transactions on Biomedical Circuits and Systems, 2008, 2, 10-21.	4.0	83
6	Analog VLSI circuits for stimulus localization and centroid computation. International Journal of Computer Vision, 1992, 8, 191-202.	15.6	68
7	High-Density Stretchable Electronics: Toward an Integrated Multilayer Composite. Advanced Materials, 2010, 22, 4030-4033.	21.0	54
8	An Effective Lift-Off Method for Patterning High-Density Gold Interconnects on an Elastomeric Substrate. Small, 2010, 6, 2847-2852.	10.0	44
9	A PDMS-Based Conical-Well Microelectrode Array for Surface Stimulation and Recording of Neural Tissues. IEEE Transactions on Biomedical Engineering, 2010, 57, 2485-2494.	4.2	32
10	Sensory Feedback in a Half-Center Oscillator Model. IEEE Transactions on Biomedical Engineering, 2007, 54, 193-204.	4.2	27
11	A comparison of resonance tuning with positive versus negative sensory feedback. Biological Cybernetics, 2007, 96, 603-614.	1.3	25
12	Modeling Alternation to Synchrony with Inhibitory Coupling: A Neuromorphic VLSI Approach. Neural Computation, 2000, 12, 2259-2278.	2.2	23
13	Selective Stimulation of the Spinal Cord Surface Using a Stretchable Microelectrode Array. Frontiers in Neuroengineering, 2011, 4, 5.	4.8	19
14	Enabling techniques for in vitro studies on mammalian spinal locomotor mechanisms. Frontiers in Bioscience - Landmark, 2012, 17, 2158.	3.0	19
15	Two-Dimensional Variation of Bursting Properties in a Silicon-Neuron Half-Center Oscillator. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2006, 14, 281-289.	4.9	15
16	Cutaneous sensory feedback from paw pads affects lateral balance control during split-belt locomotion in the cat. Journal of Experimental Biology, 2019, 222, .	1.7	14
17	Three-Dimensional Metal Transfer Micromolded Microelectrode Arrays (MEAS) for In-Vitro Brain Slice Recordings. , 2007, , .		12
18	Passive joint stiffness in the hip and knee increases the energy efficiency of leg swinging. Autonomous Robots, 2010, 29, 119-135.	4.8	12

#	ARTICLE	IF	CITATIONS
19	PDMS-based conformable microelectrode arrays with selectable novel 3-D microelectrode geometries for surface stimulation and recording. , 2009, 2009, 1623-6.		9
20	A Tunable Voltage Correlator. Analog Integrated Circuits and Signal Processing, 2004, 39, 89-94.	1.4	8
21	A conformable microelectrode array (cMEA) with integrated electronics for peripheral nerve interfacing. , 2010, , .		7
22	A three-dimensional image processing program for accurate, rapid, and semi-automated segmentation of neuronal somata with dense neurite outgrowth. Frontiers in Neuroanatomy, 2015, 9, 87.	1.7	7
23	A Prototype of a Neural, Powered, Transtibial Prosthesis for the Cat: Benchtop Characterization. Frontiers in Neuroscience, 2018, 12, 471.	2.8	7
24	Implementation of integratable PDMS-based conformable microelectrode arrays using a multilayer wiring interconnect technology. , 2009, 2009, 1619-22.		6
25	A retrofitted neural recording system with a novel stimulation IC to monitor early neural responses from a stimulating electrode. Journal of Neuroscience Methods, 2009, 178, 99-102.	2.5	5
26	Muscle surface recording and stimulation using integrated PDMS-based microelectrode arrays: Recording-triggered stimulation for prosthetic purposes. , 2009, , .		5
27	Converting spatially encoded sensory information to motor signals using analog VLSI circuits. Autonomous Robots, 1995, 2, 93-104.	4.8	4
28	Bifurcation of synchronous oscillations into torus in a system of two reciprocally inhibitory silicon neurons: Experimental observation and modeling. Chaos, 2004, 14, 995-1003.	2.5	4
29	Effects of stance width on control gain in standing balance. , 2006, 2006, 4055-7.		4
30	Temporal and spatial dynamics of spinal sensorimotor processing in an intersegmental cutaneous nociceptive reflex. Journal of Neurophysiology, 2019, 122, 616-631.	1.8	4
31	A bifurcation of a synchronous oscillations into a torus in a system of two mutually inhibitory aVLSI neurons: experimental observation. Neurocomputing, 2003, 52-54, 691-698.	5.9	3
32	A low-cost, easy-fabricating stretchable microneedle-electrode array for intramuscular recording and stimulation. , 2011, , .		3
33	Closed-Loop Characterization of Neuronal Activation Using Electrical Stimulation and Optical Imaging. Processes, 2017, 5, 30.	2.8	3
34	Targeted Stimulation Using Differences in Activation Probability across the Strengthâ€“Duration Space. Processes, 2017, 5, 14.	2.8	3
35	Analyzing the Effects of Parameters for Tremor Modulation via Phase-Locked Electrical Stimulation on a Peripheral Nerve. Journal of Personalized Medicine, 2022, 12, 76.	2.5	2
36	A PDMS-based Elastic Multi-Electrode Array for Spinal Cord Surface Stimulation and its Electrode Modification to Enhance Performance. Materials Research Society Symposia Proceedings, 2007, 1009, 1.	0.1	1

#	ARTICLE	IF	CITATIONS
37	A comparative analysis of multi-conductance neuronal models in silico. <i>Biological Cybernetics</i> , 2007, 96, 181-194.	1.3	1
38	Stimulation and recording of neural tissue, closing the loop on the artifact. , 2008, , .		1
39	Effects of stance width on control gain in standing balance. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	1
40	Optimization of Stimulation Parameters for Targeted Activation of Multiple Neurons Using Closed-Loop Search Methods. <i>Processes</i> , 2017, 5, 81.	2.8	0
41	Differential cardiovascular responses to cutaneous afferent subtypes in a nociceptive intersegmental spinal reflex. <i>Scientific Reports</i> , 2019, 9, 19049.	3.3	0
42	Passive Dynamics of a Hybrid Neuromechanical Joint Incorporating Living Muscle. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	0