

Sylvie Renaud

List of Publications by Year in descending order

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36
papers

1,568
citations

623574

14
h-index

477173

29
g-index

37
all docs

37
docs citations

37
times ranked

1954
citing authors

#	ARTICLE	IF	CITATIONS
1	Neuromorphic Silicon Neuron Circuits. <i>Frontiers in Neuroscience</i> , 2011, 5, 73.	1.4	1,004
2	A Library of Analog Operators Based on the Hodgkin-Huxley Formalism for the Design of Tunable, Real-Time, Silicon Neurons. <i>IEEE Transactions on Biomedical Circuits and Systems</i> , 2011, 5, 3-19.	2.7	45
3	Automated Parameter Estimation of the Hodgkin-Huxley Model Using the Differential Evolution Algorithm: Application to Neuromimetic Analog Integrated Circuits. <i>Neural Computation</i> , 2011, 23, 2599-2625.	1.3	40
4	Slow potentials encode intercellular coupling and insulin demand in pancreatic beta cells. <i>Diabetologia</i> , 2015, 58, 1291-1299.	2.9	39
5	Neuromimetic ICs with analog cores: an alternative for simulating spiking neural networks. , 2007, , .		38
6	Real-Time Simulation of Biologically Realistic Stochastic Neurons in VLSI. <i>IEEE Transactions on Neural Networks</i> , 2010, 21, 1511-1517.	4.8	38
7	Generation of Locomotor-Like Activity in the Isolated Rat Spinal Cord Using Intraspinal Electrical Microstimulation Driven by a Digital Neuromorphic CPG. <i>Frontiers in Neuroscience</i> , 2016, 10, 67.	1.4	36
8	An Embedded Deep Brain Stimulator for Biphasic Chronic Experiments in Freely Moving Rodents. <i>IEEE Transactions on Biomedical Circuits and Systems</i> , 2016, 10, 72-84.	2.7	34
9	Guiding pancreatic beta cells to target electrodes in a whole-cell biosensor for diabetes. <i>Lab on A Chip</i> , 2015, 15, 3880-3890.	3.1	28
10	Simultaneous monitoring of single cell and of micro-organ activity by PEDOT:PSS covered multi-electrode arrays. <i>Materials Science and Engineering C</i> , 2017, 81, 84-89.	3.8	28
11	Noninvasive long-term and real-time analysis of endocrine cells on microelectrode arrays. <i>Journal of Physiology</i> , 2012, 590, 1085-1091.	1.3	27
12	Wavelet Transform for Real-Time Detection of Action Potentials in Neural Signals. <i>Frontiers in Neuroengineering</i> , 2011, 4, 7.	4.8	26
13	Vertical Organic Electrochemical Transistors and Electronics for Low Amplitude Microorgan Signals. <i>Advanced Science</i> , 2022, 9, e2105211.	5.6	22
14	Dynamic Uni- and Multicellular Patterns Encode Biphasic Activity in Pancreatic Islets. <i>Diabetes</i> , 2021, 70, 878-888.	0.3	18
15	PAX: A mixed hardware/software simulation platform for spiking neural networks. <i>Neural Networks</i> , 2010, 23, 905-916.	3.3	16
16	Analog-digital simulations of full conductance-based networks of spiking neurons with spike timing dependent plasticity. <i>Network: Computation in Neural Systems</i> , 2006, 17, 211-233.	2.2	14
17	Bio-Inspired Controller on an FPGA Applied to Closed-Loop Diaphragmatic Stimulation. <i>Frontiers in Neuroscience</i> , 2016, 10, 275.	1.4	14
18	Biosensors in Diabetes: How to get the most out of evolution and transpose it into a signal. <i>IEEE Pulse</i> , 2014, 5, 30-34.	0.1	12

#	ARTICLE	IF	CITATIONS
19	Restoring Ventilatory Control Using an Adaptive Bioelectronic System. Journal of Neurotrauma, 2019, 36, 3363-3377.	1.7	10
20	Multimed: An Integrated, Multi-Application Platform for the Real-Time Recording and Sub-Millisecond Processing of Biosignals. Sensors, 2018, 18, 2099.	2.1	9
21	Application of IP-Based Analog Platforms in the Design of Neuromimetic Integrated Circuits. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2012, 31, 1629-1641.	1.9	7
22	Detection of Electrical Activity of Pancreatic Beta-cells Using Micro-electrode Arrays. , 2010, , .		6
23	NeuroBetaMed: A re-configurable wavelet-based event detection circuit for in vitro biological signals. , 2012, , .		6
24	A novel bioelectronic glucose sensor to process distinct electrical activities of pancreatic beta-cells. , 2013, 2013, 172-5.		6
25	An IC-based controllable stimulator for respiratory muscle stimulation investigations. , 2017, 2017, 1970-1973.		6
26	In vivo validation of a new portable stimulator for chronic deep brain stimulation in freely moving rats. Journal of Neuroscience Methods, 2020, 333, 108577.	1.3	6
27	A neuromimetic spiking neural network for simulating cortical circuits. , 2011, , .		4
28	Low-Gain, Low-Noise Integrated Neuronal Amplifier for Implantable Artifact-Reduction Recording System. Journal of Low Power Electronics and Applications, 2013, 3, 279-299.	1.3	4
29	Integrating an Islet-Based Biosensor in the Artificial Pancreas: In Silico Proof-of-Concept. IEEE Transactions on Biomedical Engineering, 2022, 69, 899-909.	2.5	4
30	Towards the Integration of an Islet-Based Biosensor in Closed-Loop Therapies for Patients With Type 1 Diabetes. Frontiers in Endocrinology, 2022, 13, 795225.	1.5	4
31	Theoretical study and optimisation of a standard deviation estimator circuit for adaptive threshold spike detection. International Journal of Circuit Theory and Applications, 2016, 44, 1742-1757.	1.3	3
32	A real-time FPGA-based implementation for detection and sorting of bio-signals. Neural Computing and Applications, 2021, 33, 12121-12140.	3.2	3
33	IC-Based Neuro-Stimulation Environment for Arbitrary Waveform Generation. Electronics (Switzerland), 2021, 10, 1867.	1.8	3
34	Autonomous control of ventilation through closed-loop adaptive respiratory pacing. Scientific Reports, 2020, 10, 21903.	1.6	3
35	A versatile electrode sorting module for MEAs: Implementation in a FPGA-based real-time system. , 2017, , .		1
36	Convergence in an Adaptive Neural Network: The Influence of Noise Inputs Correlation. Lecture Notes in Computer Science, 2009, , 140-148.	1.0	1