

Theoden Ivan Netoff

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89
papers

6,053
citations

34
h-index

77
g-index

101
ext. papers

7,049
ext. citations

4.4
avg, IF

5.79
L-index

#	Paper	IF	Citations
89	Perfusion-decellularized matrix: using nature's platform to engineer a bioartificial heart. <i>Nature Medicine</i> , 2008 , 14, 213-21	50.5	2047
88	Stochastic Resonance in a Neuronal Network from Mammalian Brain. <i>Physical Review Letters</i> , 1996 , 77, 4098-4101	7.4	271
87	Seizure prediction with spectral power of EEG using cost-sensitive support vector machines. <i>Epilepsia</i> , 2011 , 52, 1761-70	6.4	268
86	Sniffing controls an adaptive filter of sensory input to the olfactory bulb. <i>Nature Neuroscience</i> , 2007 , 10, 631-9	25.5	267
85	Decreased neuronal synchronization during experimental seizures. <i>Journal of Neuroscience</i> , 2002 , 22, 7297-307	6.6	262
84	Epilepsy in small-world networks. <i>Journal of Neuroscience</i> , 2004 , 24, 8075-83	6.6	240
83	Synchronization in hybrid neuronal networks of the hippocampal formation. <i>Journal of Neurophysiology</i> , 2005 , 93, 1197-208	3.2	170
82	Identification of the hippocampal input to medial prefrontal cortex in vitro. <i>Cerebral Cortex</i> , 2010 , 20, 393-403	5.1	115
81	Neuromodulation for brain disorders: challenges and opportunities. <i>IEEE Transactions on Biomedical Engineering</i> , 2013 , 60, 610-24	5	107
80	Early seizure detection. <i>Journal of Clinical Neurophysiology</i> , 2001 , 18, 259-68	2.2	107
79	Periodic orbits: a new language for neuronal dynamics. <i>Biophysical Journal</i> , 1998 , 74, 2776-85	2.9	90
78	Chaotic desynchronization as the therapeutic mechanism of deep brain stimulation. <i>Frontiers in Systems Neuroscience</i> , 2011 , 5, 50	3.5	86
77	Spontaneous Ca ⁺⁺ oscillations in astrocytes initiate high-frequency oscillations in model hippocampal network. <i>BMC Neuroscience</i> , 2013 , 14,	3.2	78
76	Designing anti-epileptic drugs using neuronal dynamics. <i>BMC Neuroscience</i> , 2013 , 14,	3.2	78
75	Closed-loop approach to tuning deep brain stimulation parameters for Parkinson's disease. <i>BMC Neuroscience</i> , 2015 , 16,	3.2	78
74	Application of generalized linear models to investigate functional synaptic coupling and synchrony in an animal model of schizophrenia. <i>BMC Neuroscience</i> , 2015 , 16,	3.2	78
73	Effects of spike-time dependent plasticity on deep brain stimulation of the basal ganglia for treatment of Parkinson's disease. <i>BMC Neuroscience</i> , 2015 , 16,	3.2	78

72	Reconstructing micrometer-scale fiber pathways in the brain: multi-contrast optical coherence tomography based tractography. <i>NeuroImage</i> , 2011 , 58, 984-92	7.9	78
71	Chaotic decorrelation of Globus Pallidus by periodic forcing: a possible mechanism for the therapeutic effects of deep brain stimulation. <i>BMC Neuroscience</i> , 2011 , 12,	3.2	78
70	Disruption of tonic-clonic seizures using periodic stimulation of model neurons. <i>BMC Neuroscience</i> , 2011 , 12,	3.2	78
69	Dynamical effects of antiepileptic drugs on neurons affect network synchronizability. <i>BMC Neuroscience</i> , 2010 , 11,	3.2	78
68	Mechanisms of carbachol oscillations. <i>BMC Neuroscience</i> , 2007 , 8,	3.2	78
67	Epidural Spinal Cord Stimulation Facilitates Immediate Restoration of Dormant Motor and Autonomic Supraspinal Pathways after Chronic Neurologically Complete Spinal Cord Injury. <i>Journal of Neurotrauma</i> , 2019 , 36, 2325-2336	5.4	75
66	Beyond two-cell networks: experimental measurement of neuronal responses to multiple synaptic inputs. <i>Journal of Computational Neuroscience</i> , 2005 , 18, 287-95	1.4	70
65	Synchronization from second order network connectivity statistics. <i>Frontiers in Computational Neuroscience</i> , 2011 , 5, 28	3.5	67
64	Modulations in oscillatory frequency and coupling in globus pallidus with increasing parkinsonian severity. <i>Journal of Neuroscience</i> , 2015 , 35, 6231-40	6.6	60
63	Phasic Burst Stimulation: A Closed-Loop Approach to Tuning Deep Brain Stimulation Parameters for Parkinson's Disease. <i>PLoS Computational Biology</i> , 2016 , 12, e1005011	5	57
62	Controversies in epilepsy: debates held during the Fourth International Workshop on Seizure Prediction. <i>Epilepsy and Behavior</i> , 2010 , 19, 4-16	3.2	52
61	Increasing Ca ²⁺ transients by broadening postsynaptic action potentials enhances timing-dependent synaptic depression. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005 , 102, 19121-5	11.5	51
60	Origins and suppression of oscillations in a computational model of Parkinson's disease. <i>Journal of Computational Neuroscience</i> , 2014 , 37, 505-21	1.4	50
59	Future of seizure prediction and intervention: closing the loop. <i>Journal of Clinical Neurophysiology</i> , 2015 , 32, 194-206	2.2	46
58	The variance of phase-resetting curves. <i>Journal of Computational Neuroscience</i> , 2011 , 31, 185-97	1.4	44
57	Bistable network behavior of layer I interneurons in auditory cortex. <i>Journal of Neuroscience</i> , 2005 , 25, 6175-86	6.6	40
56	Low-dimensional maps encoding dynamics in entorhinal cortex and hippocampus. <i>Neural Computation</i> , 2006 , 18, 2617-50	2.9	39
55	Targeting the Mouse Ventral Hippocampus in the Intrahippocampal Kainic Acid Model of Temporal Lobe Epilepsy. <i>ENeuro</i> , 2018 , 5,	3.9	34

54	Reversible neuroinhibition by focused ultrasound is mediated by a thermal mechanism. <i>Brain Stimulation</i> , 2019 , 12, 1439-1447	5.1	32
53	Minimum energy control for in vitro neurons. <i>Journal of Neural Engineering</i> , 2013 , 10, 036005	5	31
52	Seizure prediction using cost-sensitive support vector machine. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2009 , 2009, 3322-5	0.9	31
51	Computational modeling of epilepsy for an experimental neurologist. <i>Experimental Neurology</i> , 2013 , 244, 75-86	5.7	27
50	Experimentally Estimating Phase Response Curves of Neurons: Theoretical and Practical Issues 2012 , 95-129		27
49	Blocking NMDAR Disrupts Spike Timing and Decouples Monkey Prefrontal Circuits: Implications for Activity-Dependent Disconnection in Schizophrenia. <i>Neuron</i> , 2018 , 98, 1243-1255.e5	13.9	24
48	Seizure Control in a Computational Model Using a Reinforcement Learning Stimulation Paradigm. <i>International Journal of Neural Systems</i> , 2017 , 27, 1750012	6.2	23
47	Bayesian adaptive dual control of deep brain stimulation in a computational model of Parkinson's disease. <i>PLoS Computational Biology</i> , 2018 , 14, e1006606	5	23
46	Early Seizure Detection Using Neuronal Potential Similarity: A Generalized Low-Complexity and Robust Measure. <i>International Journal of Neural Systems</i> , 2015 , 25, 1550019	6.2	22
45	Long-Term Spinal Cord Stimulation After Chronic Complete Spinal Cord Injury Enables Volitional Movement in the Absence of Stimulation. <i>Frontiers in Systems Neuroscience</i> , 2020 , 14, 35	3.5	21
44	Dendritic mechanisms controlling the threshold and timing requirement of synaptic plasticity. <i>Hippocampus</i> , 2011 , 21, 288-97	3.5	21
43	Optimal entrainment of heterogeneous noisy neurons. <i>Frontiers in Neuroscience</i> , 2015 , 9, 192	5.1	20
42	Stochastic resonance in mammalian neuronal networks. <i>Chaos</i> , 1998 , 8, 588-598	3.3	19
41	Functional study of NIPA2 mutations identified from the patients with childhood absence epilepsy. <i>PLoS ONE</i> , 2014 , 9, e109749	3.7	19
40	Dynamical changes in neurons during seizures determine tonic to clonic shift. <i>Journal of Computational Neuroscience</i> , 2012 , 33, 41-51	1.4	17
39	Controlling spike timing and synchrony in oscillatory neurons. <i>Journal of Neurophysiology</i> , 2011 , 105, 2074-82	3.2	16
38	Nanowires precisely grown on the ends of microwire electrodes permit the recording of intracellular action potentials within deeper neural structures. <i>Nanomedicine</i> , 2012 , 7, 847-53	5.6	16
37	Analytical coupling detection in the presence of noise and nonlinearity. <i>Physical Review E</i> , 2004 , 69, 017204	2.1	15

36	Desynchronization of stochastically synchronized chemical oscillators. <i>Chaos</i> , 2015 , 25, 123116	3.3	14
35	Single neuron dynamics during experimentally induced anoxic depolarization. <i>Journal of Neurophysiology</i> , 2013 , 110, 1469-75	3.2	12
34	Seizure prediction with spectral power of time/space-differential EEG signals using cost-sensitive support vector machine 2010 ,		10
33	QRS Complex Detection and Measurement Algorithms for Multichannel ECGs in Cardiac Resynchronization Therapy Patients. <i>IEEE Journal of Translational Engineering in Health and Medicine</i> , 2018 , 6, 1900211	3	9
32	Dynamic control of modeled tonic-clonic seizure states with closed-loop stimulation. <i>Frontiers in Neural Circuits</i> , 2012 , 6, 126	3.5	9
31	Responses of thalamic neurons to itch- and pain-producing stimuli in rats. <i>Journal of Neurophysiology</i> , 2018 , 120, 1119-1134	3.2	8
30	The Sliding Windowed Infinite Fourier Transform [Tips & Tricks]. <i>IEEE Signal Processing Magazine</i> , 2017 , 34, 183-188	9.4	8
29	Phase Response Curves to Measure Ion Channel Effects on Neurons 2012 , 207-236		8
28	Seizure prediction with bipolar spectral power features using Adaboost and SVM classifiers. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2013 , 2013, 6305-8	0.9	6
27	Parameterized phase response curves for characterizing neuronal behaviors under transient conditions. <i>Journal of Neurophysiology</i> , 2013 , 109, 2306-16	3.2	6
26	Data Driven Classification Using fMRI Network Measures: Application to Schizophrenia. <i>Frontiers in Neuroinformatics</i> , 2018 , 12, 71	3.9	6
25	Robust and low complexity algorithms for seizure detection. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2014 , 2014, 4447-50	0.9	5
24	Computational modeling to advance deep brain stimulation for the treatment of Parkinson's disease. <i>Drug Discovery Today: Disease Models</i> , 2016 , 19, 31-36	1.3	5
23	Electroretinographic evidence of retinal ganglion cell-dependent function in schizophrenia. <i>Schizophrenia Research</i> , 2020 , 219, 34-46	3.6	5
22	A single-cell based hybrid neuronal network configured by integration of cell micropatterning and dynamic patch-clamp. <i>Applied Physics Letters</i> , 2018 , 113, 133703	3.4	4
21	Seizure detection on/off system using rats' ECoG. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2012 , 2012, 4688-91	0.9	3
20	Reducing the number of features for seizure prediction of spectral power in intracranial EEG 2012 ,		3
19	A low complexity seizure prediction algorithm. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2011 , 2011, 1640-3	0.9	3

18	A thermal mechanism underlies tFUS neuromodulation. <i>Brain Stimulation</i> , 2020 , 13, 327-328	5.1	3
17	The Ability to Predict Seizure Onset 2019 , 365-378		3
16	Controlling spike timing and synchrony in oscillatory neurons. <i>BMC Neuroscience</i> , 2011 , 12,	3.2	2
15	Linear control of neuronal spike timing using phase response curves. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2009 , 2009, 1541-4	0.9	2
14	Hybrid neuronal network studies under dynamic clamp. <i>Methods in Molecular Biology</i> , 2007 , 403, 219-31	1.4	2
13	Gait phase triggered deep brain stimulation in Parkinson's disease. <i>Brain Stimulation</i> , 2021 , 14, 420-422	5.1	2
12	Integrating Insights: Using Fault Tree Analysis to Guide Schizophrenia Research across Levels of Analysis. <i>Frontiers in Human Neuroscience</i> , 2015 , 9, 698	3.3	2
11	Closed-Loop neuromodulation for clustering neuronal populations. <i>Journal of Neurophysiology</i> , 2021 , 125, 248-255	3.2	2
10	Optimization of Spinal Cord Stimulation Using Bayesian Preference Learning and Its Validation. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2021 , 29, 1987-1997	4.8	2
9	Predicting deep-brain stimulation frequencies to suppress pathological population oscillations in a network model of Parkinson's disease. <i>BMC Neuroscience</i> , 2013 , 14,	3.2	1
8	Seizure Prediction With Spectral Power of EEG Using Cost-Sensitive Support Vector Machines. <i>Journal of Medical Devices, Transactions of the ASME</i> , 2010 , 4,	1.3	1
7	Disparate insults relevant to schizophrenia converge on impaired spike synchrony and weaker synaptic interactions in prefrontal local circuits. <i>Current Biology</i> , 2021 ,	6.3	1
6	Synchronization in Hybrid Neuronal Networks 2008 , 281-287		1
5	Discrepancy Between Internal and External Intracranial Pressure Transducers: Quantification of an Old Source of Error in EVDs?. <i>World Neurosurgery</i> , 2020 , 133, e18-e25	2.1	1
4	Semi-automated approaches to optimize deep brain stimulation parameters in Parkinson's disease. <i>Journal of NeuroEngineering and Rehabilitation</i> , 2021 , 18, 83	5.3	0
3	Epidural stimulation improves cerebral autoregulation and autonomic cardiac control in humans with spinal cord injury. <i>FASEB Journal</i> , 2019 , 33, 533.6	0.9	
2	Epidural electrical stimulation and hemodynamic control after spinal cord injury. <i>FASEB Journal</i> , 2020 , 34, 1-1	0.9	
1	Spike Time Response Curve 2022 , 3228-3230		

