Theoden Ivan Netoff

List of Publications by Year
in descending order

97 papers	6,703 citations	136950 32 h-index	82547 72 g-index

101 all docs	101 docs citations	101 times ranked	8146 citing authors

#	Article	IF	Citations
1	Perfusion-decellularized matrix: using nature's platform to engineer a bioartificial heart. Nature Medicine, 2008, 14, 213-221.	30.7	2,385
2	Sniffing controls an adaptive filter of sensory input to the olfactory bulb. Nature Neuroscience, 2007, 10, 631-639.	14.8	346
3	Seizure prediction with spectral power of EEG using cost-sensitive support vector machines. Epilepsia, 2011, 52, 1761-1770.	5.1	341
4	Stochastic Resonance in a Neuronal Network from Mammalian Brain. Physical Review Letters, 1996, 77, 4098-4101.	7.8	316
5	Decreased Neuronal Synchronization during Experimental Seizures. Journal of Neuroscience, 2002, 22, 7297-7307.	3.6	294
6	Epilepsy in Small-World Networks. Journal of Neuroscience, 2004, 24, 8075-8083.	3.6	285
7	Synchronization in Hybrid Neuronal Networks of the Hippocampal Formation. Journal of Neurophysiology, 2005, 93, 1197-1208.	1.8	188
8	Epidural Spinal Cord Stimulation Facilitates Immediate Restoration of Dormant Motor and Autonomic Supraspinal Pathways after Chronic Neurologically Complete Spinal Cord Injury. Journal of Neurotrauma, 2019, 36, 2325-2336.	3.4	157
9	Neuromodulation for Brain Disorders: Challenges and Opportunities. IEEE Transactions on Biomedical Engineering, 2013, 60, 610-624.	4.2	148
10	Identification of the Hippocampal Input to Medial Prefrontal Cortex In Vitro. Cerebral Cortex, 2010, 20, 393-403.	2.9	131
11	Early Seizure Detection. Journal of Clinical Neurophysiology, 2001, 18, 259-268.	1.7	128
12	Chaotic Desynchronization as the Therapeutic Mechanism of Deep Brain Stimulation. Frontiers in Systems Neuroscience, 2011, 5, 50.	2.5	111
13	Reconstructing micrometer-scale fiber pathways in the brain: Multi-contrast optical coherence tomography based tractography. NeuroImage, 2011, 58, 984-992.	4.2	104
14	Periodic Orbits: A New Language for Neuronal Dynamics. Biophysical Journal, 1998, 74, 2776-2785.	0.5	94
15	Beyond Two-Cell Networks: Experimental Measurement of Neuronal Responses to Multiple Synaptic Inputs. Journal of Computational Neuroscience, 2005, 18, 287-295.	1.0	82
16	Synchronization from Second Order Network Connectivity Statistics. Frontiers in Computational Neuroscience, 2011, 5, 28.	2.1	80
17	Phasic Burst Stimulation: A Closed-Loop Approach to Tuning Deep Brain Stimulation Parameters for Parkinsonâ€™s Disease. PLoS Computational Biology, 2016, 12, e1005011.	3.2	79
18	Modulations in Oscillatory Frequency and Coupling in Globus Pallidus with Increasing Parkinsonian Severity. Journal of Neuroscience, 2015, 35, 6231-6240.	3.6	72

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19	Reversible neuroinhibition by focused ultrasound is mediated by a thermal mechanism. Brain Stimulation, 2019, 12, 1439-1447.	1.6	69
20	Future of Seizure Prediction and Intervention. Journal of Clinical Neurophysiology, 2015, 32, 194-206.	1.7	67
21	Origins and suppression of oscillations in a computational model of Parkinsonâ€™s disease. Journal of Computational Neuroscience, 2014, 37, 505-521.	1.0	62
22	Controversies in epilepsy: Debates held during the Fourth International Workshop on Seizure Prediction. Epilepsy and Behavior, 2010, 19, 4-16.	1.7	61
23	Bayesian adaptive dual control of deep brain stimulation in a computational model of Parkinsonâ€™s disease. PLoS Computational Biology, 2018, 14, e1006606.	3.2	59
24	Increasing Ca2+ transients by broadening postsynaptic action potentials enhances timing-dependent synaptic depression. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 19121-19125.	7.1	55
25	Targeting the Mouse Ventral Hippocampus in the Intrahippocampal Kainic Acid Model of Temporal Lobe Epilepsy. ENeuro, 2018, 5, ENEURO.0158-18.2018.	1.9	55
26	Long-Term Spinal Cord Stimulation After Chronic Complete Spinal Cord Injury Enables Volitional Movement in the Absence of Stimulation. Frontiers in Systems Neuroscience, 2020, 14, 35.	2.5	53
27	The variance of phase-resetting curves. Journal of Computational Neuroscience, 2011, 31, 185-197.	1.0	49
28	Low-Dimensional Maps Encoding Dynamics in Entorhinal Cortex and Hippocampus. Neural Computation, 2006, 18, 2617-2650.	2.2	43
29	Bistable Network Behavior of Layer I Interneurons in Auditory Cortex. Journal of Neuroscience, 2005, 25, 6175-6186.	3.6	42
30	Seizure prediction using cost-sensitive support vector machine. , 2009, 2009, 3322-5.		42
31	Blocking NMDAR Disrupts Spike Timing and Decouples Monkey Prefrontal Circuits: Implications for Activity-Dependent Disconnection in Schizophrenia. Neuron, 2018, 98, 1243-1255.e5.	8.1	40
32	Seizure Control in a Computational Model Using a Reinforcement Learning Stimulation Paradigm. International Journal of Neural Systems, 2017, 27, 1750012.	5.2	37
33	Experimentally Estimating Phase Response Curves of Neurons: Theoretical and Practical Issues. , 2012, , 95-129.		35
34	Computational modeling of epilepsy for an experimental neurologist. Experimental Neurology, 2013, 244, 75-86.	4.1	35
35	Minimum energy control forin vitroneurons. Journal of Neural Engineering, 2013, 10, 036005.	3.5	34
36	Dendritic mechanisms controlling the threshold and timing requirement of synaptic plasticity. Hippocampus, 2011, 21, 288-297.	1.9	26

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37	Optimal entrainment of heterogeneous noisy neurons. Frontiers in Neuroscience, 2015, 9, 192.	2.8	26
38	Functional Study of NIPA2 Mutations Identified from the Patients with Childhood Absence Epilepsy. PLoS ONE, 2014, 9, e109749.	2.5	26
39	Stochastic resonance in mammalian neuronal networks. Chaos, 1998, 8, 588-598.	2.5	22
40	Early Seizure Detection Using Neuronal Potential Similarity: A Generalized Low-Complexity and Robust Measure. International Journal of Neural Systems, 2015, 25, 1550019.	5.2	22
41	Dynamical changes in neurons during seizures determine tonic to clonic shift. Journal of Computational Neuroscience, 2012, 33, 41-51.	1.0	19
42	Nanowires precisely grown on the ends of microwire electrodes permit the recording of intracellular action potentials within deeper neural structures. Nanomedicine, 2012, 7, 847-853.	3.3	18
43	Optimization of Spinal Cord Stimulation Using Bayesian Preference Learning and Its Validation. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2021, 29, 1987-1997.	4.9	18
44	Analytical coupling detection in the presence of noise and nonlinearity. Physical Review E, 2004, 69, 017201.	2.1	17
45	Controlling spike timing and synchrony in oscillatory neurons. Journal of Neurophysiology, 2011, 105, 2074-2082.	1.8	17
46	Responses of thalamic neurons to itch- and pain-producing stimuli in rats. Journal of Neurophysiology, 2018, 120, 1119-1134.	1.8	17
47	Seizure prediction with spectral power of time/space-differential EEG signals using cost-sensitive support vector machine. , 2010, , .		16
48	Single neuron dynamics during experimentally induced anoxic depolarization. Journal of Neurophysiology, 2013, 110, 1469-1475.	1.8	16
49	Desynchronization of stochastically synchronized chemical oscillators. Chaos, 2015, 25, 123116.	2.5	16
50	The Sliding Windowed Infinite Fourier Transform [Tips & Tricks]. IEEE Signal Processing Magazine, 2017, 34, 183-188.	5.6	16
51	Optimization of closed-loop electrical stimulation enables robust cerebellar-directed seizure control. Brain, 2023, 146, 91-108.	7.6	16
52	QRS Complex Detection and Measurement Algorithms for Multichannel ECGs in Cardiac Resynchronization Therapy Patients. IEEE Journal of Translational Engineering in Health and Medicine, 2018, 6, 1-11.	3.7	14
53	Electoretinographic evidence of retinal ganglion cell-dependent function in schizophrenia. Schizophrenia Research, 2020, 219, 34-46.	2.0	14
54	Semi-automated approaches to optimize deep brain stimulation parameters in Parkinsonâ€™s disease. Journal of NeuroEngineering and Rehabilitation, 2021, 18, 83.	4.6	13

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55	Dynamic control of modeled tonic-clonic seizure states with closed-loop stimulation. Frontiers in Neural Circuits, 2012, 6, 126.	2.8	12
56	Seizure prediction with bipolar spectral power features using Adaboost and SVM classifiers. , 2013, 2013, 6305-8.		11
57	Data Driven Classification Using fMRI Network Measures: Application to Schizophrenia. Frontiers in Neuroinformatics, 2018, 12, 71.	2.5	11
58	Gait phase triggered deep brain stimulation in Parkinsonâ€™s disease. Brain Stimulation, 2021, 14, 420-422.	1.6	11
59	Phase Response Curves to Measure Ion Channel Effects on Neurons. , 2012, , 207-236.		9
60	The safety of epidural spinal cord stimulation to restore function after spinal cord injury: post-surgical complications and incidence of cardiovascular events. Spinal Cord, 2022, 60, 903-910.	1.9	9
61	Computational modeling to advance deep brain stimulation for the treatment of Parkinsonâ€™s disease. Drug Discovery Today: Disease Models, 2016, 19, 31-36.	1.2	8
62	A single-cell based hybrid neuronal network configured by integration of cell micropatterning and dynamic patch-clamp. Applied Physics Letters, 2018, 113, .	3.3	8
63	Evaluation of functional MRI-based human brain parcellation: a review. Journal of Neurophysiology, 2022, 128, 197-217.	1.8	8
64	The Ability to Predict Seizure Onset. , 2019, , 365-378.		7
65	A thermal mechanism underlies tFUS neuromodulation. Brain Stimulation, 2020, 13, 327-328.	1.6	7
66	Disparate insults relevant to schizophrenia converge on impaired spike synchrony and weaker synaptic interactions in prefrontal local circuits. Current Biology, 2022, 32, 14-25.e4.	3.9	7
67	Strength-frequency curve for micromagnetic neurostimulation through excitatory postsynaptic potentials (EPSPs) on rat hippocampal neurons and numerical modeling of magnetic microcoil (Î¼coil). Journal of Neural Engineering, 2022, 19, 016018.	3.5	7
68	Parameterized phase response curves for characterizing neuronal behaviors under transient conditions. Journal of Neurophysiology, 2013, 109, 2306-2316.	1.8	6
69	Robust and low complexity algorithms for seizure detection. , 2014, 2014, 4447-50.		6
70	Closed-Loop neuromodulation for clustering neuronal populations. Journal of Neurophysiology, 2021, 125, 248-255.	1.8	6
71	A low complexity seizure prediction algorithm. , 2011, 2011, 1640-3.		5
72	Seizure detection on/off system using rats' ECoG. , 2012, 2012, 4688-91.		4

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73	Reducing the number of features for seizure prediction of spectral power in intracranial EEG. , 2012, , .		4
74	Integrating Insults: Using Fault Tree Analysis to Guide Schizophrenia Research across Levels of Analysis. Frontiers in Human Neuroscience, 2015, 9, 698.	2.0	4
75	Fully Closed Loop Test Environment for Adaptive Implantable Neural Stimulators Using Computational Models. Journal of Medical Devices, Transactions of the ASME, 2022, 16, .	0.7	3
76	Linear control of neuronal spike timing using phase response curves. , 2009, 2009, 1541-4.		2
77	Seizure Prediction With Spectral Power of EEG Using Cost-Sensitive Support Vector Machines. Journal of Medical Devices, Transactions of the ASME, 2010, 4, .	0.7	2
78	Controlling spike timing and synchrony in oscillatory neurons. BMC Neuroscience, 2011, 12, .	1.9	2
79	Discrepancy Between Internal and External Intracranial Pressure Transducers: Quantification of an Old Source of Error in EVDs?. World Neurosurgery, 2020, 133, e18-e25.	1.3	2
80	Hybrid Neuronal Network Studies Under Dynamic Clamp. Methods in Molecular Biology, 2007, 403, 219-231.	0.9	2
81	Feasibility testing of a novel prosthetic socket sensor system. Disability and Rehabilitation, 0, , 1-8.	1.8	2
82	Chaotic decorrelation of Globus Pallidus by periodic forcing: a possible mechanism for the therapeutic effects of deep brain stimulation. BMC Neuroscience, 2011, 12, .	1.9	1
83	Predicting deep-brain stimulation frequencies to suppress pathological population oscillations in a network model of Parkinson's disease. BMC Neuroscience, 2013, 14, .	1.9	1
84	Syncronization in Hybrid Neuronal Networks. , 2008, , 281-287.		1
85	Mechanisms of carbachol oscillations. BMC Neuroscience, 2007, 8, .	1.9	0
86	Dynamical effects of antiepileptic drugs on neurons affect network synchronizability. BMC Neuroscience, 2010, 11, .	1.9	0
87	Disruption of tonic-clonic seizures using periodic stimulation of model neurons. BMC Neuroscience, 2011, 12, .	1.9	0
88	Spontaneous Ca++ oscillations in astrocytes initiate high-frequency oscillations in model hippocampal network. BMC Neuroscience, 2013, 14, .	1.9	0
89	Designing anti-epileptic drugs using neuronal dynamics. BMC Neuroscience, 2013, 14, .	1.9	0
90	Closed-loop approach to tuning deep brain stimulation parameters for Parkinson's disease. BMC Neuroscience, 2015, 16, .	1.9	0

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91	Application of generalized linear models to investigate functional synaptic coupling and synchrony in an animal model of schizophrenia. BMC Neuroscience, 2015, 16, .	1.9	0
92	Effects of spike-time dependent plasticity on deep brain stimulation of the basal ganglia for treatment of Parkinson's disease. BMC Neuroscience, 2015, 16, .	1.9	0
93	214 Using Interictal Multivariate Granger Causality to Detect Epileptogenic Hubs. Neurosurgery, 2017, 64, 258.	1.1	0
94	S189. Disordered Patterns of Communication Within Local Cortical Circuits in a Mouse Model of Schizophrenia. Biological Psychiatry, 2019, 85, S370.	1.3	0
95	Epidural stimulation improves cerebral autoregulation and autonomic cardiac control in humans with spinal cord injury. FASEB Journal, 2019, 33, 533.6.	0.5	0
96	Epidural electrical stimulation and hemodynamic control after spinal cord injury. FASEB Journal, 2020, 34, 1-1.	0.5	0
97	Spike Time Response Curve. , 2022, , 3228-3230.		0