Alan D Dorval

List of Publications by Year
in descending order

32 papers	1,709 citations	393982 19 h-index	433756 31 g-index
34 all docs	34 docs citations	34 times ranked	1626 citing authors

#	ARTICLE	IF	CITATIONS
1	Synchronization in Hybrid Neuronal Networks of the Hippocampal Formation. Journal of Neurophysiology, 2005, 93, 1197-1208.	0.9	188
2	Deep Brain Stimulation Alleviates Parkinsonian Bradykinesia by Regularizing Pallidal Activity. Journal of Neurophysiology, 2010, 104, 911-921.	0.9	150
3	Deep Brain Stimulation Reduces Neuronal Entropy in the MPTP-Primate Model of Parkinson's Disease. Journal of Neurophysiology, 2008, 100, 2807-2818.	0.9	145
4	Real-Time Linux Dynamic Clamp: A Fast and Flexible Way to Construct Virtual Ion Channels in Living Cells. Annals of Biomedical Engineering, 2001, 29, 897-907.	1.3	144
5	Channel Noise is Essential for Perithreshold Oscillations in Entorhinal Stellate Neurons. Journal of Neuroscience, 2005, 25, 10025-10028.	1.7	121
6	Optimized programming algorithm for cylindrical and directional deep brain stimulation electrodes. Journal of Neural Engineering, 2018, 15, 026005.	1.8	104
7	Stimulus features underlying reduced tremor suppression with temporally patterned deep brain stimulation. Journal of Neurophysiology, 2012, 107, 364-383.	0.9	93
8	Anodic stimulation misunderstood: preferential activation of fiber orientations with anodic waveforms in deep brain stimulation. Journal of Neural Engineering, 2019, 16, 016026.	1.8	81
9	Prospects for transcranial temporal interference stimulation in humans: A computational study. NeuroImage, 2019, 202, 116124.	2.1	74
10	Deep brain stimulation of the subthalamic nucleus reestablishes neuronal information transmission in the 6-OHDA rat model of parkinsonism. Journal of Neurophysiology, 2014, 111, 1949-1959.	0.9	64
11	Evaluation of methodologies for computing the deep brain stimulation volume of tissue activated. Journal of Neural Engineering, 2019, 16, 066024.	1.8	61
12	Tremor varies as a function of the temporal regularity of deep brain stimulation. NeuroReport, 2008, 19, 599-602.	0.6	60
13	Hard real-time closed-loop electrophysiology with the Real-Time eXperiment Interface (RTXI). PLoS Computational Biology, 2017, 13, e1005430.	1.5	55
14	Probability distributions of the logarithm of inter-spike intervals yield accurate entropy estimates from small datasets. Journal of Neuroscience Methods, 2008, 173, 129-139.	1.3	47
15	Neural selectivity, efficiency, and dose equivalence in deep brain stimulation through pulse width tuning and segmented electrodes. Brain Stimulation, 2020, 13, 1040-1050.	0.7	43
16	Spike Phase Locking in CA1 Pyramidal Neurons Depends on Background Conductance and Firing Rate. Journal of Neuroscience, 2012, 32, 14374-14388.	1.7	42
17	Contributions of I h to feature selectivity in layer II stellate cells of the entorhinal cortex. Journal of Computational Neuroscience, 2007, 22, 161-171.	0.6	37
18	Subthalamic deep brain stimulation reduces pathological information transmission to the thalamus in a rat model of parkinsonism. Frontiers in Neural Circuits, 2015, 9, 31.	1.4	31

#	Article	IF	Citations
19	Deep cerebellar stimulation reduces ataxic motor symptoms in the <i>shaker</i> rat. Annals of Neurology, 2019, 85, 681-690.	2.8	30
20	The Î¼DBS: Multiresolution, Directional Deep Brain Stimulation for Improved Targeting of Small Diameter Fibers. Frontiers in Neuroscience, 2019, 13, 1152.	1.4	17
21	Patientâ€specific structural connectivity informs outcomes of responsive neurostimulation for temporal lobe epilepsy. Epilepsia, 2022, 63, 2037-2055.	2.6	16
22	Deep brain stimulation that abolishes parkinsonian activity in basal ganglia improves thalamic relay fidelity in a computational circuit. , 2009, 2009, 4230-3.		15
23	Estimating Neuronal Information: Logarithmic Binning of Neuronal Inter-Spike Intervals. Entropy, 2011, 13, 485-501.	1.1	15
24	The Rhythmic Consequences of Ion Channel Stochasticity. Neuroscientist, 2006, 12, 442-448.	2.6	12
25	Information in pallidal neurons increases with parkinsonian severity. Parkinsonism and Related Disorders, 2015, 21, 1355-1361.	1.1	12
26	Computational Field Shaping for Deep Brain Stimulation With Thousands of Contacts in a Novel Electrode Geometry. Neuromodulation, 2015, 18, 542-551.	0.4	11
27	Parkinsonism and subthalamic deep brain stimulation dysregulate behavioral motivation in a rodent model. Brain Research, 2020, 1736, 146776.	1.1	10
28	Deep brain stimulation exacerbates hypokinetic dysarthria in a rat model of Parkinson's disease. Journal of Neuroscience Research, 2016, 94, 128-138.	1.3	7
29	Correlation between cortical beta power and gait speed is suppressed in a parkinsonian model, but restored by therapeutic deep brain stimulation. Neurobiology of Disease, 2018, 117, 137-148.	2.1	7
30	Validating Patient-Specific Finite Element Models of Direct Electrocortical Stimulation. Frontiers in Neuroscience, 2021, 15, 691701.	1.4	6
31	A Sordid Affair: Spike Sorting and Data Reproducibility. Neurosurgery, 2018, 82, N19-N20.	0.6	3
32	Computational investigation of the impact of deep brain stimulation contact size and shape on neural selectivity. Journal of Neural Engineering, 2021, , .	1.8	3