Christopher Butson

List of Publications by Year
in descending order

74 papers	4,742 citations	126708 33 h-index	106150 65 g-index
83 all docs	83 docs citations	83 times ranked	3876 citing authors

#	Article	IF	Citations
1	Identification of Deep Brain Stimulation Targets for Neuropathic Pain After Spinal Cord Injury Using Localized Increases in White Matter Fiber Cross Section. Neuromodulation, 2022, 25, 276-285.	0.4	3
2	Past, Present, and Future of Deep Brain Stimulation: Hardware, Software, Imaging, Physiology and Novel Approaches. Frontiers in Neurology, 2022, 13, 825178.	1.1	28
3	Patientâ€specific structural connectivity informs outcomes of responsive neurostimulation for temporal lobe epilepsy. Epilepsia, 2022, 63, 2037-2055.	2.6	16
4	Basal Ganglia Pathways Associated With Therapeutic Pallidal Deep Brain Stimulation for Tourette Syndrome. Biological Psychiatry: Cognitive Neuroscience and Neuroimaging, 2021, 6, 961-972.	1.1	12
5	Functional Hyperconnectivity and Task-Based Activity Changes Associated With Neuropathic Pain After Spinal Cord Injury: A Pilot Study. Frontiers in Neurology, 2021, 12, 613630.	1.1	8
6	Connectomic Deep Brain Stimulation for Obsessive-Compulsive Disorder. Biological Psychiatry, 2021, 90, 678-688.	0.7	61
7	Home Health Management of Parkinson Disease Deep Brain Stimulation. JAMA Neurology, 2021, 78, 972.	4.5	13
8	Validating Patient-Specific Finite Element Models of Direct Electrocortical Stimulation. Frontiers in Neuroscience, 2021, 15, 691701.	1.4	6
9	Selective activation of central thalamic fiber pathway facilitates behavioral performance in healthy non-human primates. Scientific Reports, 2021, 11, 23054.	1.6	11
10	Interactive computation and visualization of deep brain stimulation effects using Duality. Computer Methods in Biomechanics and Biomedical Engineering: Imaging and Visualization, 2020, 8, 3-14.	1.3	3
11	Structural connectivity predicts clinical outcomes of deep brain stimulation for Tourette syndrome. Brain, 2020, 143, 2607-2623.	3.7	50
12	The International Neuromodulation Registry: An Informatics Framework Supporting Cohort Discovery and Analysis. Frontiers in Neuroinformatics, 2020, 14, 36.	1.3	1
13	A systematic exploration of parameters affecting evoked intracranial potentials in patients with epilepsy. Brain Stimulation, 2020, 13, 1232-1244.	0.7	31
14	Tract-based analysis of target engagement by subcallosal cingulate deep brain stimulation for treatment resistant depression. Brain Stimulation, 2020, 13, 1094-1101.	0.7	22
15	Activation robustness with directional leads and multi-lead configurations in deep brain stimulation. Journal of Neural Engineering, 2020, 17, 026012.	1.8	7
16	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
17	Evaluation of methodologies for computing the deep brain stimulation volume of tissue activated. Journal of Neural Engineering, 2019, 16, 066024.	1.8	61
18	A retrospective evaluation of automated optimization of deep brain stimulation parameters. Journal of Neural Engineering, 2019, 16, 064002.	1.8	20

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19	Interleaved deep brain stimulation for dyskinesia management in Parkinson's disease. Movement Disorders, 2019, 34, 1722-1727.	2.2	18
20	Influence of Head Tissue Conductivity Uncertainties on EEG Dipole Reconstruction. Frontiers in Neuroscience, 2019, 13, 531.	1.4	64
21	Image-based analysis and long-term clinical outcomes of deep brain stimulation for Tourette syndrome: a multisite study. Journal of Neurology, Neurosurgery and Psychiatry, 2019, 90, 1078-1090.	0.9	81
22	Effect of STN DBS on vesicular monoamine transporter 2 and glucose metabolism in Parkinson's disease. Parkinsonism and Related Disorders, 2019, 64, 235-241.	1.1	12
23	The Î¼DBS: Multiresolution, Directional Deep Brain Stimulation for Improved Targeting of Small Diameter Fibers. Frontiers in Neuroscience, 2019, 13, 1152.	1.4	17
24	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
25	A statistical framework for quantification and visualisation of positional uncertainty in deep brain stimulation electrodes. Computer Methods in Biomechanics and Biomedical Engineering: Imaging and Visualization, 2019, 7, 438-449.	1.3	9
26	Pedunculopontine nucleus deep brain stimulation in Parkinson's disease: A clinical review. Movement Disorders, 2018, 33, 10-20.	2.2	166
27	Optimized programming algorithm for cylindrical and directional deep brain stimulation electrodes. Journal of Neural Engineering, 2018, 15, 026005.	1.8	104
28	Targeting Neuronal Fiber Tracts for Deep Brain Stimulation Therapy Using Interactive, Patient-Specific Models. Journal of Visualized Experiments, 2018, , .	0.2	6
29	Deep brain stimulation for the treatment of disorders of consciousness and cognition in traumatic brain injury patients: a review. Neurosurgical Focus, 2018, 45, E14.	1.0	60
30	Longitudinal Changes in Depressive Circuitry in Response to Neuromodulation Therapy. Frontiers in Neural Circuits, 2016, 10, 50.	1.4	55
31	Robust modulation of arousal regulation, performance, and frontostriatal activity through central thalamic deep brain stimulation in healthy nonhuman primates. Journal of Neurophysiology, 2016, 116, 2383-2404.	0.9	72
32	Subject-Specific Multiscale Modeling to Investigate Effects of Transcranial Magnetic Stimulation. Neuromodulation, 2015, 18, 694-704.	0.4	37
33	The Use of Stimulation Field Models for Deep Brain Stimulation Programming. Brain Stimulation, 2015, 8, 976-978.	0.7	10
34	Antidepressant-like Effects of Medial Forebrain Bundle Deep Brain Stimulation in Rats are not Associated With Accumbens Dopamine Release. Brain Stimulation, 2015, 8, 708-713.	0.7	29
35	Coordinate-Based Lead Location Does Not Predict Parkinson's Disease Deep Brain Stimulation Outcome. PLoS ONE, 2014, 9, e93524.	1.1	48
36	Anatomical Targets Associated with Abrupt versus Gradual Washout of Subthalamic Deep Brain Stimulation Effects on Bradykinesia. PLoS ONE, 2014, 9, e99663.	1.1	21

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37	Deep brain stimulation in rats: Different targets induce similar antidepressant-like effects but influence different circuits. Neurobiology of Disease, 2014, 71, 205-214.	2.1	74
38	Acute and Chronic Mood and Apathy Outcomes from a Randomized Study of Unilateral STN and GPi DBS. PLoS ONE, 2014, 9, e114140.	1.1	40
39	Potential for unreliable interpretation of <scp>EEG</scp> recorded with microelectrodes. Epilepsia, 2013, 54, 1391-1401.	2.6	25
40	Gamma power correlates with clinical response to repetitive transcranial magnetic stimulation (rTMS) for depression. , 2013, , .		0
41	The Role of Electrode Location and Stimulation Polarity in Patient Response to Cortical Stimulation for Major Depressive Disorder. Brain Stimulation, 2013, 6, 254-260.	0.7	14
42	Evaluation of Interactive Visualization on Mobile Computing Platforms for Selection of Deep Brain Stimulation Parameters. IEEE Transactions on Visualization and Computer Graphics, 2013, 19, 108-117.	2.9	51
43	Holographically patterned activation using photo-absorber induced neuralâ€“thermal stimulation. Journal of Neural Engineering, 2013, 10, 056004.	1.8	52
44	Management of Deep Brain Stimulator Battery Failure: Battery Estimators, Charge Density, and Importance of Clinical Symptoms. PLoS ONE, 2013, 8, e58665.	1.1	66
45	Computational Models of Neuromodulation. International Review of Neurobiology, 2012, 107, 5-22.	0.9	8
46	Signal distortion from microelectrodes in clinical EEG acquisition systems. Journal of Neural Engineering, 2012, 9, 056007.	1.8	18
47	Spectral signal space projection algorithm for frequency domain MEG and EEG denoising, whitening, and source imaging. NeuroImage, 2011, 56, 78-92.	2.1	43
48	Probabilistic analysis of activation volumes generated during deep brain stimulation. NeuroImage, 2011, 54, 2096-2104.	2.1	155
49	Epidural Cortical Stimulation of the Left Dorsolateral Prefrontal Cortex for Refractory Major Depressive Disorder. Neurosurgery, 2011, 69, 1015-1029.	0.6	65
50	Selective neural activation in a histologically derived model of peripheral nerve. Journal of Neural Engineering, 2011, 8, 036009.	1.8	31
51	Patient-specific models of deep brain stimulation: Influence of field model complexity on neural activation predictions. Brain Stimulation, 2010, 3, 65-77.	0.7	180
52	Neuromagnetic source imaging of abnormal spontaneous activity in tinnitus patient modulated by electrical cortical stimulation. , 2009, 2009, 1940-4.		11
53	Deep brain stimulation activation volumes and their association with neurophysiological mapping and therapeutic outcomes. Journal of Neurology, Neurosurgery and Psychiatry, 2009, 80, 659-666.	0.9	196
54	Automated 3-Dimensional Brain Atlas Fitting to Microelectrode Recordings from Deep Brain Stimulation Surgeries. Stereotactic and Functional Neurosurgery, 2009, 87, 229-240.	0.8	28

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55	Experimental and theoretical characterization of the voltage distribution generated by deep brain stimulation. Experimental Neurology, 2009, 216, 166-176.	2.0	153
56	Current steering to control the volume of tissue activated during deep brain stimulation. Brain Stimulation, 2008, 1, 7-15.	0.7	195
57	Random Noise Paradoxically Improves Light-Intensity Encoding in Hermissenda Photoreceptor Network. Journal of Neurophysiology, 2008, 99, 146-154.	0.9	3
58	Mechanisms of Noise-Induced Improvement in Light-Intensity Encoding inHermissendaPhotoreceptor Network. Journal of Neurophysiology, 2008, 99, 155-165.	0.9	4
59	Differences among implanted pulse generator waveforms cause variations in the neural response to deep brain stimulation. Clinical Neurophysiology, 2007, 118, 1889-1894.	0.7	83
60	Patient-specific analysis of the volume of tissue activated during deep brain stimulation. NeuroImage, 2007, 34, 661-670.	2.1	438
61	Computational analysis of deep brain stimulation. Expert Review of Medical Devices, 2007, 4, 615-622.	1.4	54
62	Cicerone: stereotactic neurophysiological recording and deep brain stimulation electrode placement software system. , 2007, 97, 561-567.		100
63	StimExplorer: deep brain stimulation parameter selection software system. , 2007, 97, 569-574.		20
64	Optimizing Deep Brain Stimulation Parameter Selection with Detailed Models of the Electrode-Tissue Interface. , 2006, 2006, 893-5.		35
65	Sources and effects of electrode impedance during deep brain stimulation. Clinical Neurophysiology, 2006, 117, 447-454.	0.7	315
66	Role of electrode design on the volume of tissue activated during deep brain stimulation. Journal of Neural Engineering, 2006, 3, 1-8.	1.8	257
67	Subthalamic Nucleus Deep Brain Stimulation: Accurate Axonal Threshold Prediction with Diffusion Tensor Based Electric Field Models. , 2006, 2006, 1240-3.		19
68	Computational Analysis of Subthalamic Nucleus and Lenticular Fasciculus Activation During Therapeutic Deep Brain Stimulation. Journal of Neurophysiology, 2006, 96, 1569-1580.	0.9	284
69	Predicting the Effects of Deep Brain Stimulation with Diffusion Tensor Based Electric Field Models. Lecture Notes in Computer Science, 2006, 9, 429-437.	1.0	14
70	Optimizing Deep Brain Stimulation Parameter Selection with Detailed Models of the Electrode-Tissue Interface. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	0
71	Subthalamic Nucleus Deep Brain Stimulation: Accurate Axonal Threshold Prediction with Diffusion Tensor Based Electric Field Models. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	0
72	Tissue and electrode capacitance reduce neural activation volumes during deep brain stimulation. Clinical Neurophysiology, 2005, 116, 2490-2500.	0.7	283

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73	Deep brain stimulation of the subthalamic nucleus: model-based analysis of the effects of electrode capacitance on the volume of activation. , 2005, , .		3
74	Post-light Potentiation at Type B to A Photoreceptor Connections in Hermissenda. Neurobiology of Learning and Memory, 2001, 76, 7-32.	1.0	1