

Andrew P Davison

List of Publications by Year in descending order

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Version: 2024-02-01

40
papers

3,002
citations

331538

21
h-index

330025

37
g-index

46
all docs

46
docs citations

46
times ranked

3135
citing authors

#	ARTICLE	IF	CITATIONS
1	Simulation of networks of spiking neurons: A review of tools and strategies. <i>Journal of Computational Neuroscience</i> , 2007, 23, 349-398.	0.6	639
2	PyNN: a common interface for neuronal network simulators. <i>Frontiers in Neuroinformatics</i> , 2008, 2, 11.	1.3	409
3	NEURON and Python. <i>Frontiers in Neuroinformatics</i> , 2009, 3, 1.	1.3	331
4	NeuroML: A Language for Describing Data Driven Models of Neurons and Networks with a High Degree of Biological Detail. <i>PLoS Computational Biology</i> , 2010, 6, e1000815.	1.5	294
5	Neo: an object model for handling electrophysiology data in multiple formats. <i>Frontiers in Neuroinformatics</i> , 2014, 8, 10.	1.3	120
6	ModelDB: Making Models Publicly Accessible to Support Computational Neuroscience. <i>Neuroinformatics</i> , 2003, 1, 135-140.	1.5	103
7	Toward standard practices for sharing computer code and programs in neuroscience. <i>Nature Neuroscience</i> , 2017, 20, 770-773.	7.1	87
8	Sustainable computational science: the ReScience initiative. <i>PeerJ Computer Science</i> , 2017, 3, e142.	2.7	86
9	Dendrodendritic Inhibition and Simulated Odor Responses in a Detailed Olfactory Bulb Network Model. <i>Journal of Neurophysiology</i> , 2003, 90, 1921-1935.	0.9	80
10	A Commitment to Open Source in Neuroscience. <i>Neuron</i> , 2017, 96, 964-965.	3.8	77
11	A comprehensive workflow for general-purpose neural modeling with highly configurable neuromorphic hardware systems. <i>Biological Cybernetics</i> , 2011, 104, 263-296.	0.6	72
12	Automated Capture of Experiment Context for Easier Reproducibility in Computational Research. <i>Computing in Science and Engineering</i> , 2012, 14, 48-56.	1.2	72
13	Python in neuroscience. <i>Frontiers in Neuroinformatics</i> , 2015, 9, 11.	1.3	60
14	BIOPHYSICAL AND PHENOMENOLOGICAL MODELS OF MULTIPLE SPIKE INTERACTIONS IN SPIKE-TIMING DEPENDENT PLASTICITY. <i>International Journal of Neural Systems</i> , 2006, 16, 79-97.	3.2	56
15	Open Source Brain: A Collaborative Resource for Visualizing, Analyzing, Simulating, and Developing Standardized Models of Neurons and Circuits. <i>Neuron</i> , 2019, 103, 395-411.e5.	3.8	56
16	A reduced compartmental model of the mitral cell for use in network models of the olfactory bulb. <i>Brain Research Bulletin</i> , 2000, 51, 393-399.	1.4	41
17	Trends in programming languages for neuroscience simulations. <i>Frontiers in Neuroscience</i> , 2009, 3, 374-380.	1.4	38
18	libNeuroML and PyLEMS: using Python to combine procedural and declarative modeling approaches in computational neuroscience. <i>Frontiers in Neuroinformatics</i> , 2014, 8, 38.	1.3	35

#	ARTICLE	IF	CITATIONS
19	Establishing a Novel Modeling Tool: A Python-based Interface for a Neuromorphic Hardware System. <i>Frontiers in Neuroinformatics</i> , 2009, 3, 17.	1.3	35
20	Learning from the Past: Approaches for Reproducibility in Computational Neuroscience. , 2013, , 73-102.		34
21	Code Generation in Computational Neuroscience: A Review of Tools and Techniques. <i>Frontiers in Neuroinformatics</i> , 2018, 12, 68.	1.3	32
22	The SONATA data format for efficient description of large-scale network models. <i>PLoS Computational Biology</i> , 2020, 16, e1007696.	1.5	32
23	Learning Cross-Modal Spatial Transformations through Spike Timing-Dependent Plasticity. <i>Journal of Neuroscience</i> , 2006, 26, 5604-5615.	1.7	30
24	Reliable Recall of Spontaneous Activity Patterns in Cortical Networks. <i>Journal of Neuroscience</i> , 2009, 29, 14596-14606.	1.7	30
25	Semi-Automated Population of an Online Database of Neuronal Models (ModelDB) With Citation Information, Using PubMed for Validation. <i>Neuroinformatics</i> , 2004, 2, 327-332.	1.5	17
26	Spike synchronization in a biophysically-detailed model of the olfactory bulb. <i>Neurocomputing</i> , 2001, 38-40, 515-521.	3.5	14
27	Creating, documenting and sharing network models. <i>Network: Computation in Neural Systems</i> , 2012, 23, 131-149.	2.2	14
28	HippoUnit: A software tool for the automated testing and systematic comparison of detailed models of hippocampal neurons based on electrophysiological data. <i>PLoS Computational Biology</i> , 2021, 17, e1008114.	1.5	12
29	A Collaborative Simulation-Analysis Workflow for Computational Neuroscience Using HPC. <i>Lecture Notes in Computer Science</i> , 2017, , 243-256.	1.0	11
30	Computational Neuroscience Ontology: a new tool to provide semantic meaning to your models. <i>BMC Neuroscience</i> , 2012, 13, .	0.8	10
31	Integrated workflows for spiking neuronal network simulations. <i>Frontiers in Neuroinformatics</i> , 2013, 7, 34.	1.3	10
32	Collaborative modelling: The future of computational neuroscience?. <i>Network: Computation in Neural Systems</i> , 2012, 23, 157-166.	2.2	8
33	Efficient generation of connectivity in neuronal networks from simulator-independent descriptions. <i>Frontiers in Neuroinformatics</i> , 2014, 8, 43.	1.3	8
34	Editorial: Reproducibility and Rigour in Computational Neuroscience. <i>Frontiers in Neuroinformatics</i> , 2020, 14, 23.	1.3	8
35	Arkheia: Data Management and Communication for Open Computational Neuroscience. <i>Frontiers in Neuroinformatics</i> , 2018, 12, 6.	1.3	5
36	COMPLEXITY IN NEURONAL NETWORKS. <i>Complex Systems and Interdisciplinary Science</i> , 2007, , 291-340.	0.2	2

#	ARTICLE	IF	CITATIONS
37	Spatial organization of evoked neuronal dynamics in 2D recurrent networks, with or without structured stimulation. BMC Neuroscience, 2009, 10, .	0.8	1
38	Challenges and solutions in replicability and provenance tracking for simulation projects. BMC Neuroscience, 2010, 11, .	0.8	1
39	Caring for the environment: the blooming "Python in Neuroscience" ecosystem. BMC Neuroscience, 2009, 10, .	0.8	0
40	PyNN: A Python API for Neural Network Modelling. , 2022, , 2947-2948.		0