Andrew P Davison

List of Publications by Year
in descending order

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	PyNN: A Python API for Neural Network Modelling. , 2022, , 2947-2948.		0
2	HippoUnit: A software tool for the automated testing and systematic comparison of detailed models of hippocampal neurons based on electrophysiological data. PLoS Computational Biology, 2021, 17, e1008114.	1.5	12
3	Editorial: Reproducibility and Rigour in Computational Neuroscience. Frontiers in Neuroinformatics, 2020, 14, 23.	1.3	8
4	The SONATA data format for efficient description of large-scale network models. PLoS Computational Biology, 2020, 16, e1007696.	1.5	32
5	Open Source Brain: A Collaborative Resource for Visualizing, Analyzing, Simulating, and Developing Standardized Models of Neurons and Circuits. Neuron, 2019, 103, 395-411.e5.	3.8	56
6	Code Generation in Computational Neuroscience: A Review of Tools and Techniques. Frontiers in Neuroinformatics, 2018, 12, 68.	1.3	32
7	Arkheia: Data Management and Communication for Open Computational Neuroscience. Frontiers in Neuroinformatics, 2018, 12, 6.	1.3	5
8	Toward standard practices for sharing computer code and programs in neuroscience. Nature Neuroscience, 2017, 20, 770-773.	7.1	87
9	A Commitment to Open Source in Neuroscience. Neuron, 2017, 96, 964-965.	3.8	77
10	A Collaborative Simulation-Analysis Workflow for Computational Neuroscience Using HPC. Lecture Notes in Computer Science, 2017, , 243-256.	1.0	11
11	Sustainable computational science: the ReScience initiative. PeerJ Computer Science, 2017, 3, e142.	2.7	86
12	Python in neuroscience. Frontiers in Neuroinformatics, 2015, 9, 11.	1.3	60
13	Neo: an object model for handling electrophysiology data in multiple formats. Frontiers in Neuroinformatics, 2014, 8, 10.	1.3	120
14	libNeuroML and PyLEMS: using Python to combine procedural and declarative modeling approaches in computational neuroscience. Frontiers in Neuroinformatics, 2014, 8, 38.	1.3	35
15	Efficient generation of connectivity in neuronal networks from simulator-independent descriptions. Frontiers in Neuroinformatics, 2014, 8, 43.	1.3	8
16	Integrated workflows for spiking neuronal network simulations. Frontiers in Neuroinformatics, 2013, 7, 34.	1.3	10
17	Learning from the Past: Approaches for Reproducibility in Computational Neuroscience. , 2013, , 73-102.		34
18	Automated Capture of Experiment Context for Easier Reproducibility in Computational Research. Computing in Science and Engineering, 2012, 14, 48-56.	1.2	72

#	Article	IF	Citations
19	Collaborative modelling: The future of computational neuroscience?. Network: Computation in Neural Systems, 2012, 23, 157-166.	2.2	8
20	Creating, documenting and sharing network models. Network: Computation in Neural Systems, 2012, 23, 131-149.	2.2	14
21	Computational Neuroscience Ontology: a new tool to provide semantic meaning to your models. BMC Neuroscience, 2012, 13, .	0.8	10
22	A comprehensive workflow for general-purpose neural modeling with highly configurable neuromorphic hardware systems. Biological Cybernetics, 2011, 104, 263-296.	0.6	72
23	Challenges and solutions in replicability and provenance tracking for simulation projects. BMC Neuroscience, 2010, 11, .	0.8	1
24	NeuroML: A Language for Describing Data Driven Models of Neurons and Networks with a High Degree of Biological Detail. PLoS Computational Biology, 2010, 6, e1000815.	1.5	294
25	Trends in programming languages for neuroscience simulations. Frontiers in Neuroscience, 2009, 3, 374-380.	1.4	38
26	NEURON and Python. Frontiers in Neuroinformatics, 2009, 3, 1.	1.3	331
27	Reliable Recall of Spontaneous Activity Patterns in Cortical Networks. Journal of Neuroscience, 2009, 29, 14596-14606.	1.7	30
28	Spatial organization of evoked neuronal dynamics in 2D recurrent networks, with or without structured stimulation. BMC Neuroscience, 2009, 10, .	0.8	1
29	Caring for the environment: the blooming "Python in Neuroscience" ecosystem. BMC Neuroscience, 2009, 10, .	0.8	0
30	Establishing a Novel Modeling Tool: A Python-based Interface for a Neuromorphic Hardware System. Frontiers in Neuroinformatics, 2009, 3, 17.	1.3	35
31	PyNN: a common interface for neuronal network simulators. Frontiers in Neuroinformatics, 2008, 2, 11.	1.3	409
32	COMPLEXITY IN NEURONAL NETWORKS. Complex Systems and Interdisciplinary Science, 2007, , 291-340.	0.2	2
33	Simulation of networks of spiking neurons: A review of tools and strategies. Journal of Computational Neuroscience, 2007, 23, 349-398.	0.6	639
34	Learning Cross-Modal Spatial Transformations through Spike Timing-Dependent Plasticity. Journal of Neuroscience, 2006, 26, 5604-5615.	1.7	30
35	BIOPHYSICAL AND PHENOMENOLOGICAL MODELS OF MULTIPLE SPIKE INTERACTIONS IN SPIKE-TIMING DEPENDENT PLASTICITY. International Journal of Neural Systems, 2006, 16, 79-97.	3.2	56
36	Semi-Automated Population of an Online Database of Neuronal Models (ModelDB) With Citation Information, Using PubMed for Validation. Neuroinformatics, 2004, 2, 327-332.	1.5	17

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37	ModelDB: Making Models Publicly Accessible to Support Computational Neuroscience. Neuroinformatics, 2003, 1, 135-140.	1.5	103
38	Dendrodendritic Inhibition and Simulated Odor Responses in a Detailed Olfactory Bulb Network Model. Journal of Neurophysiology, 2003, 90, 1921-1935.	0.9	80
39	Spike synchronization in a biophysically-detailed model of the olfactory bulb. Neurocomputing, 2001, 38-40, 515-521.	3.5	14
40	A reduced compartmental model of the mitral cell for use in network models of the olfactory bulb. Brain Research Bulletin, 2000, 51, 393-399.	1.4	41