Stephen J Eglen

List of Publications by Year
in descending order

74 papers	2,390 citations	201674 27 h-index	243625 44 g-index
89 all docs	89 docs citations	89 times ranked	2937 citing authors

#	Article	IF	Citations
1	Development of Retinal Ganglion Cell Structure and Function. Progress in Retinal and Eye Research, 2001, 20, 139-174.	15.5	181
2	Detecting Pairwise Correlations in Spike Trains: An Objective Comparison of Methods and Application to the Study of Retinal Waves. Journal of Neuroscience, 2014, 34, 14288-14303.	3.6	153
3	Developmental Loss of Synchronous Spontaneous Activity in the Mouse Retina Is Independent of Visual Experience. Journal of Neuroscience, 2003, 23, 2851-2860.	3.6	151
4	Following the ontogeny of retinal waves: panâ€retinal recordings of population dynamics in the neonatal mouse. Journal of Physiology, 2014, 592, 1545-1563.	2.9	109
5	Ten Simple Rules for Taking Advantage of Git and GitHub. PLoS Computational Biology, 2016, 12, e1004947.	3.2	96
6	Developmental Modulation of Retinal Wave Dynamics: Shedding Light on the GABA Saga. Journal of Neuroscience, 2003, 23, 7621-7629.	3.6	87
7	Toward standard practices for sharing computer code and programs in neuroscience. Nature Neuroscience, 2017, 20, 770-773.	14.8	87
8	LL5Î². Journal of Cell Biology, 2005, 169, 355-366.	5.2	78
9	A comparison of computational methods for detecting bursts in neuronal spike trains and their application to human stem cell-derived neuronal networks. Journal of Neurophysiology, 2016, 116, 306-321.	1.8	77
10	Functional characterization of human pluripotent stem cell-derived cortical networks differentiated on laminin-521 substrate: comparison to rat cortical cultures. Scientific Reports, 2019, 9, 17125.	3.3	77
11	Quantitative differences in developmental profiles of spontaneous activity in cortical and hippocampal cultures. Neural Development, 2015, 10, 1.	2.4	72
12	Determinants of the exclusion zone in dopaminergic amacrine cell mosaics. Journal of Comparative Neurology, 2003, 461, 123-136.	1.6	61
13	Characterization of Early Cortical Neural Network Development in Multiwell Microelectrode Array Plates. Journal of Biomolecular Screening, 2016, 21, 510-519.	2.6	61
14	Compensatory redistribution of neuroligins and Nâ€cadherin following deletion of synaptic Î²1â€integrin. Journal of Comparative Neurology, 2012, 520, 2041-2052.	1.6	54
15	Neural circuits for peristaltic wave propagation in crawling Drosophila larvae: analysis and modeling. Frontiers in Computational Neuroscience, 2013, 7, 24.	2.1	54
16	Influence of cell fate mechanisms upon retinal mosaic formation: a modelling study. Development (Cambridge), 2002, 129, 5399-5408.	2.5	49
17	t Differential Effects of Acetylcholine and Glutamate Blockade on the Spatiotemporal Dynamics of Retinal Waves. Journal of Neuroscience, 2000, 20, RC56-RC56.	3.6	44
18	From random to regular: Variation in the patterning of retinal mosaics*. Journal of Comparative Neurology, 2020, 528, 2135-2160.	1.6	44

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19	Segregation of on and offRetinogeniculate Connectivity Directed by Patterned Spontaneous Activity. Journal of Neurophysiology, 2002, 88, 2311-2321.	1.8	42
20	Ten simple rules for writing Dockerfiles for reproducible data science. PLoS Computational Biology, 2020, 16, e1008316.	3.2	42
21	Lateral cell movement driven by dendritic interactions is sufficient to form retinal mosaics. Network: Computation in Neural Systems, 2000, 11, 103-118.	3.6	40
22	Burst-Time-Dependent Plasticity Robustly Guides ON/OFF Segregation in the Lateral Geniculate Nucleus. PLoS Computational Biology, 2009, 5, e1000618.	3.2	40
23	Dopaminergic amacrine cells in the inner nuclear layer and ganglion cell layer comprise a single functional retinal mosaic. Journal of Comparative Neurology, 2003, 466, 343-355.	1.6	36
24	A data repository and analysis framework for spontaneous neural activity recordings in developing retina. GigaScience, 2014, 3, 3.	6.4	36
25	Development of regular cellular spacing in the retina: theoretical models. Mathematical Medicine and Biology, 2006, 23, 79-99.	1.2	34
26	Neuronal clustering and fasciculation phenotype in Dscamâ€•and Baxâ€deficient mouse retinas. Journal of Comparative Neurology, 2012, 520, 1349-1364.	1.6	33
27	A Multi-Component Model of the Developing Retinocollicular Pathway Incorporating Axonal and Synaptic Growth. PLoS Computational Biology, 2009, 5, e1000600.	3.2	31
28	The role of retinal waves and synaptic normalization in retinogeniculate development. Philosophical Transactions of the Royal Society B: Biological Sciences, 1999, 354, 497-506.	4.0	29
29	Homotypic constraints dominate positioning of on- and off-center beta retinal ganglion cells. Visual Neuroscience, 2005, 22, 859-871.	1.0	28
30	Theoretical models of spontaneous activity generation and propagation in the developing retina. Molecular BioSystems, 2009, 5, 1527.	2.9	27
31	A Quick Guide to Teaching R Programming to Computational Biology Students. PLoS Computational Biology, 2009, 5, e1000482.	3.2	24
32	Parasol cell mosaics are unlikely to drive the formation of structured orientation maps in primary visual cortex. Visual Neuroscience, 2012, 29, 283-299.	1.0	22
33	meaRtools: An R package for the analysis of neuronal networks recorded on microelectrode arrays. PLoS Computational Biology, 2018, 14, e1006506.	3.2	22
34	Mapping by Waves. Neuron, 2003, 40, 1053-1055.	8.1	21
35	Automated feature extraction for the classification of humanin vivo13C NMR spectra using statistical pattern recognition and wavelets. Magnetic Resonance in Medicine, 1996, 35, 834-840.	3.0	19
36	Analysis of spatial relationships in three dimensions: tools for the study of nerve cell patterning. BMC Neuroscience, 2008, 9, 68.	1.9	19

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37	Quantitative assessment of computational models for retinotopic map formation. Developmental Neurobiology, 2015, 75, 641-666.	3.0	19
38	Homeostatic Activity-Dependent Tuning of Recurrent Networks for Robust Propagation of Activity. Journal of Neuroscience, 2016, 36, 3722-3734.	3.6	18
39	A molecular mechanism for the topographic alignment of convergent neural maps. ELife, 2017, 6, .	6.0	17
40	Modelling the Bivariate Spatial Distribution of Amacrine Cells. , 2006, , 215-233.		16
41	Selfâ€organization in the developing nervous system: Theoretical models. HFSP Journal, 2009, 3, 176-185.	2.5	14
42	GABAergic control of retinal ganglion cell dendritic development. Neuroscience, 2012, 227, 30-43.	2.3	12
43	Can Retinal Ganglion Cell Dipoles Seed Iso-Orientation Domains in the Visual Cortex?. PLoS ONE, 2014, 9, e86139.	2.5	12
44	Editorial: Quantitative Analysis of Neuroanatomy. Frontiers in Neuroanatomy, 2015, 9, 143.	1.7	12
45	Spatial constraints underlying the retinal mosaics of two types of horizontal cells in cat and macaque. Visual Neuroscience, 2008, 25, 209-214.	1.0	11
46	Minimum Information about a Neuroscience Investigation (MINI) Electrophysiology. Nature Precedings, 2008, , .	0.1	11
47	Modeling developmental patterns of spontaneous activity. Current Opinion in Neurobiology, 2011, 21, 679-684.	4.2	11
48	Lateral cell movement driven by dendritic interactions is sufficient to form retinal mosaics. Network: Computation in Neural Systems, 2000, 11, 103-118.	3.6	11
49	Minimum Information about a Neuroscience Investigation (MINI): Electrophysiology. Nature Precedings, 2009, , .	0.1	10
50	Cellular Spacing: Analysis and Modelling of Retinal Mosaics. , 2012, , 365-385.		10
51	Canalization of genetic and pharmacological perturbations in developing primary neuronal activity patterns. Neuropharmacology, 2016, 100, 47-55.	4.1	10
52	Burst Detection Methods. Advances in Neurobiology, 2019, 22, 185-206.	1.8	8
53	CODECHECK: an Open Science initiative for the independentÂexecution of computations underlying research articles during peer review to improve reproducibility. F1000Research, 2021, 10, 253.	1.6	8
54	Causality indices for bivariate time series data: A comparative review of performance. Chaos, 2021, 31, 083111.	2.5	8

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55	Unsupervised discovery of invariances. Network: Computation in Neural Systems, 1997, 8, 441-452.	3.6	5
56	Retinal mosaics. , 2006, , 193-207.		5
57	Recent developments in scholarly publishing to improve research practices in the life sciences. Emerging Topics in Life Sciences, 2018, 2, 775-778.	2.6	5
58	CODECHECK: an Open Science initiative for the independentÂexecution of computations underlying research articles during peer review to improve reproducibility. F1000Research, 2021, 10, 253.	1.6	5
59	CODECHECK: An open-science initiative to facilitate sharing of computer programs and results presented in scientific publications. Septentrio Conference Series, 2019, , .	0.0	5
60	Using Wavelets for Classifying Human in vivo Magnetic Resonance Spectra. Lecture Notes in Statistics, 1995, , 377-383.	0.2	5
61	Estimating the location and size of retinal injections from orthogonal images of an intact retina. BMC Neuroscience, 2015, 16, 80.	1.9	4
62	DeepClean: Self-Supervised Artefact Rejection for Intensive Care Waveform Data Using Deep Generative Learning. Acta Neurochirurgica Supplementum, 2021, 131, 235-241.	1.0	4
63	Programmed cell death. , 2006, , 208-241.		3
64	Sharing your data is easier than you think. Nature, 2014, 510, 340-340.	27.8	3
65	Unsupervised discovery of invariances. Network: Computation in Neural Systems, 1997, 8, 441-452.	3.6	3
66	Sepsis-3 criteria in AmsterdamUMCdb: open-source code implementation. GigaByte, 0, 2022, 1-7.	0.0	3
67	Synaptogenesis and early neural activity. , 2006, , 265-287.		2
68	Neuronal clustering and fasciculation phenotype in Dscam- and Bax-deficient mouse retinas. Journal of Comparative Neurology, 2012, 520, Spc1-Spc1.	1.6	2
69	Emergence of light responses. , 0, , 288-304.		1
70	Analysis of simultaneous multielectrode recordings with 4,096 channels: changing dynamics of spontaneous activity in the developing retina. BMC Neuroscience, 2011, 12, .	1.9	1
71	The Role of Simplifying Models in Neuroscience: Modelling Structure and Function. Lecture Notes in Computer Science, 2008, , 33-44.	1.3	1
72	Geniculo-Cortical Projection Diversity Revealed within the Mouse Visual Thalamus. PLoS ONE, 2016, 11, e0144846.	2.5	1

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73	Retinotopic Development, Models of. , 2015, , 2631-2633.		0
74	Open Code and Peer Review. Open Science Talk, 2020, , .	0.1	0