Erik De Schutter

List of Publications by Year in Descending Order

169 papers	7,392 citations	51 h-index	80 g-index
210 ext. papers	8,510 ext. citations	4.8 avg, IF	6.21 L-index

#	Paper	IF	Citations
169	A differential Hebbian framework for biologically-plausible motor control.. *Neural Networks*, **2022**, 150, 237-258	9.1	1
168	Modeling Neurons in 3D at the Nanoscale.. *Advances in Experimental Medicine and Biology*, **2022**, 1359, 3-24	3.6	0
167	Comment on "The growth of cognition: Free energy minimization and the embryogenesis of cortical computation". *Physics of Life Reviews*, **2021**, 36, 1-2	2.1	1
166	The Cellular Electrophysiological Properties Underlying Multiplexed Coding in Purkinje Cells. *Journal of Neuroscience*, **2021**, 41, 1850-1863	6.6	7
165	Firing rate-dependent phase responses of Purkinje cells support transient oscillations. *ELife*, **2020**, 9,	8.9	6
164	Pycabnn: Efficient and Extensible Software to Construct an Anatomical Basis for a Physiologically Realistic Neural Network Model. *Frontiers in Neuroinformatics*, **2020**, 14, 31	3.9	2
163	Climbing Fibers Provide Graded Error Signals in Cerebellar Learning. *Frontiers in Systems Neuroscience*, **2019**, 13, 46	3.5	11
162	Draculab: A Python Simulator for Firing Rate Neural Networks With Delayed Adaptive Connections. *Frontiers in Neuroinformatics*, **2019**, 13, 18	3.9	2
161	Variability and directionality of inferior olive neuron dendrites revealed by detailed 3D characterization of an extensive morphological library. *Brain Structure and Function*, **2019**, 224, 1677-1695	4	13
160	Switching On Depression and Potentiation in the Cerebellum. *Cell Reports*, **2018**, 22, 722-733	10.6	26
159	Design and implementation of multi-signal and time-varying neural reconstructions. *Scientific Data*, **2018**, 5, 170207	8.2	17
158	The choroid plexus is an important circadian clock component. *Nature Communications*, **2018**, 9, 1062	17.4	56
157	Voltage- and Branch-Specific Climbing Fiber Responses in Purkinje Cells. *Cell Reports*, **2018**, 24, 1536-1549	10.6	23
156	Ca Requirements for Long-Term Depression Are Frequency Sensitive in Purkinje Cells. *Frontiers in Molecular Neuroscience*, **2018**, 11, 438	6.1	8
155	Spatiotemporal network coding of physiological mossy fiber inputs by the cerebellar granular layer. *PLoS Computational Biology*, **2017**, 13, e1005754	5	25
154	26th Annual Computational Neuroscience Meeting (CNS*2017): Part 3. *BMC Neuroscience*, **2017**, 18,	3.2	2
153	Parallel STEPS: Large Scale Stochastic Spatial Reaction-Diffusion Simulation with High Performance Computers. *Frontiers in Neuroinformatics*, **2017**, 11, 13	3.9	15

152	A Model of Induction of Cerebellar Long-Term Depression Including RKIP Inactivation of Raf and MEK. *Frontiers in Molecular Neuroscience*, **2017**, 10, 19	6.1	4
151	Multiplexed coding by cerebellar Purkinje neurons. *ELife*, **2016**, 5,	8.9	40
150	Models of the Cortico-cerebellar System **2016**, 1-24		
149	Models of the Cortico-cerebellar System **2016**, 3097-3119		
148	Accurate reaction-diffusion operator splitting on tetrahedral meshes for parallel stochastic molecular simulations. *Journal of Chemical Physics*, **2016**, 145, 054118	3.9	9
147	GABA-mediated repulsive coupling between circadian clock neurons in the SCN encodes seasonal time. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, E3920-9	11.5	97
146	On the firing rate dependency of the phase response curve of rat Purkinje neurons in vitro. *PLoS Computational Biology*, **2015**, 11, e1004112	5	17
145	Implementation of parallel spatial stochastic reaction-diffusion simulation in STEPS. *BMC Neuroscience*, **2015**, 16,	3.2	78
144	The effect of synchronized pauses on the coding strategies of cerebellar nuclear neurons: a modeling study. *BMC Neuroscience*, **2015**, 16,	3.2	78
143	Accurate approximation to stochastic reaction diffusion on unstructured meshes in STEPS. *BMC Neuroscience*, **2015**, 16,	3.2	78
142	Duration of Purkinje cell complex spikes increases with their firing frequency. *Frontiers in Cellular Neuroscience*, **2015**, 9, 122	6.1	20
141	Non-linear leak currents affect mammalian neuron physiology. *Frontiers in Cellular Neuroscience*, **2015**, 9, 432	6.1	7
140	Purkinje cells: the forest shapes the trees. *BMC Neuroscience*, **2015**, 16,	3.2	78
139	The ionic mechanism of the Purkinje cell dendritic spikes generation and propagation: a model exploration. *BMC Neuroscience*, **2015**, 16,	3.2	78
138	Cerebellar Nuclear Neurons Use Time and Rate Coding to Transmit Purkinje Neuron Pauses. *PLoS Computational Biology*, **2015**, 11, e1004641	5	16
137	The role of dendritic spine morphology in the compartmentalization and delivery of surface receptors. *Journal of Computational Neuroscience*, **2014**, 36, 483-97	1.4	10
136	Patterns in network activity and information processing in a detailed computer model of the cerebellar granular layer. *BMC Neuroscience*, **2014**, 15, O2	3.2	78
135	A NineML-based domain-specific language for computational exploration of connectivity in the cerebellar granular layer. *BMC Neuroscience*, **2014**, 15,	3.2	2

134	Accurate approximation and MPI parallelization of spatial stochastic reaction-diffusion in STEPS. *BMC Neuroscience*, **2014**, 15,	3.2	2
133	Context-aware modeling of neuronal morphologies. *Frontiers in Neuroanatomy*, **2014**, 8, 92	3.6	25
132	Dendritic diameters affect the spatial variability of intracellular calcium dynamics in computer models. *Frontiers in Cellular Neuroscience*, **2014**, 8, 168	6.1	21
131	Python-based geometry preparation and simulation visualization toolkits for STEPS. *Frontiers in Neuroinformatics*, **2014**, 8, 37	3.9	5
130	Saccade angle modulates correlation between the local field potential and cerebellar Purkinje neuron activity. *BMC Neuroscience*, **2013**, 14,	3.2	78
129	Exploring the limitations of simulator independence via an implementation of a biophysically detailed cerebellar cortex model in NEURON and NEST. *BMC Neuroscience*, **2013**, 14,	3.2	78
128	Dendritic Volume Mesh Reconstruction for STEPS: How Does Mesh Quality Affect Stochastic Reaction-Diffusion Simulation?. *BMC Neuroscience*, **2013**, 14,	3.2	78
127	Initial state of single spines affects probability of induction of cerebellar long term depression in a stochastic model. *BMC Neuroscience*, **2013**, 14,	3.2	78
126	Challenges of declarative modeling of conductance-based neurons in diverse simulation environments. *BMC Neuroscience*, **2013**, 14,	3.2	78
125	Stochastic calcium mechanisms cause dendritic calcium spike variability. *Journal of Neuroscience*, **2013**, 33, 15848-67	6.6	30
124	The importance of stochastic signaling processes in the induction of long-term synaptic plasticity. *Neural Networks*, **2013**, 47, 3-10	9.1	4
123	Impact of neuronal properties on network coding: roles of spike initiation dynamics and robust synchrony transfer. *Neuron*, **2013**, 78, 758-72	13.9	108
122	Na+/K+-ATPase inhibition partially mimics the ethanol-induced increase of the Golgi cell-dependent component of the tonic GABAergic current in rat cerebellar granule cells. *PLoS ONE*, **2013**, 8, e55673	3.7	12
121	Kv3.3b expression defines the shape of the complex spike in the Purkinje cell. *Frontiers in Cellular Neuroscience*, **2013**, 7, 205	6.1	10
120	Efficient calculation of the quasi-static electrical potential on a tetrahedral mesh and its implementation in STEPS. *Frontiers in Computational Neuroscience*, **2013**, 7, 129	3.5	8
119	Excitation of rat cerebellar Golgi cells by ethanol: further characterization of the mechanism. *Alcoholism: Clinical and Experimental Research*, **2012**, 36, 616-24	3.7	16
118	Quantitative single-cell ion-channel gene expression profiling through an improved qRT-PCR technique combined with whole cell patch clamp. *Journal of Neuroscience Methods*, **2012**, 209, 227-34	3	15
117	Breakdown of Mass-Action Laws in Biochemical Computation **2012**, 119-132		

116	Single neuron firing properties impact correlation-based population coding. *Journal of Neuroscience*, **2012**, 32, 1413-28	6.6	55
115	STEPS: efficient simulation of stochastic reaction-diffusion models in realistic morphologies. *BMC Systems Biology*, **2012**, 6, 36	3.5	96
114	Controlling Ca2+-activated K+ channels with models of Ca2+ buffering in Purkinje cells. *Cerebellum*, **2012**, 11, 681-93	4.3	32
113	Geometric theory predicts bifurcations in minimal wiring cost trees in biology are flat. *PLoS Computational Biology*, **2012**, 8, e1002474	5	16
112	The layer-oriented approach to declarative languages for biological modeling. *PLoS Computational Biology*, **2012**, 8, e1002521	5	8
111	Efficient estimation of phase-response curves via compressive sensing. *Journal of Neurophysiology*, **2012**, 108, 2069-81	3.2	5
110	A stochastic signaling network mediates the probabilistic induction of cerebellar long-term depression. *Journal of Neuroscience*, **2012**, 32, 9288-300	6.6	47
109	Period coding of Bmal1 oscillators in the suprachiasmatic nucleus. *Journal of Neuroscience*, **2012**, 32, 8900-18	6.6	56
108	The diffusional properties of dendrites depend on the density of dendritic spines. *European Journal of Neuroscience*, **2011**, 34, 561-8	3.5	49
107	The mysterious microcircuitry of the cerebellar nuclei. *Journal of Physiology*, **2011**, 589, 3441-57	3.9	71
106	The RAT-ROTADRUM: a reaction time task depending on a continuous stream of tactile sensory information to the rat. *Journal of Neuroscience Methods*, **2011**, 200, 153-63	3	4
105	Determinants of synaptic integration and heterogeneity in rebound firing explored with data-driven models of deep cerebellar nucleus cells. *Journal of Computational Neuroscience*, **2011**, 30, 633-58	1.4	54
104	Robustness effect of gap junctions between Golgi cells on cerebellar cortex oscillations. *Neural Systems & Circuits*, **2011**, 1, 7		20
103	Current source density correlates of cerebellar Golgi and Purkinje cell responses to tactile input. *Journal of Neurophysiology*, **2011**, 105, 1327-41	3.2	18
102	Long-term depression at parallel fiber to Golgi cell synapses. *Journal of Neurophysiology*, **2010**, 104, 3413-23	3.2	34
101	Alcohol excites cerebellar Golgi cells by inhibiting the Na+/K+ ATPase. *Neuropsychopharmacology*, **2010**, 35, 1984-96	8.7	38
100	Tetrahedral mesh generation and visualization for stochastic reaction-diffusion simulation. *BMC Neuroscience*, **2010**, 11,	3.2	1
99	STEPS: Modeling and Simulating Complex Reaction-Diffusion Systems with Python. *Frontiers in Neuroinformatics*, **2009**, 3, 15	3.9	52

98	Review of papers describing neuroinformatics software. *Neuroinformatics*, **2009**, 7, 211-2	3.2	1
97	Disentangling perceptual from motor implicit sequence learning with a serial color-matching task. *Experimental Brain Research*, **2009**, 197, 163-74	2.3	29
96	Patterns and pauses in Purkinje cell simple spike trains: experiments, modeling and theory. *Neuroscience*, **2009**, 162, 816-26	3.9	80
95	Modeling Complex Neurons **2009**, 259-284		6
94	Purkinje neurons: What is the signal for complex spikes?. *Current Biology*, **2008**, 18, R969-71	6.3	5
93	Why are computational neuroscience and systems biology so separate?. *PLoS Computational Biology*, **2008**, 4, e1000078	5	75
92	Calcium, synaptic plasticity and intrinsic homeostasis in purkinje neuron models. *Frontiers in Computational Neuroscience*, **2008**, 2, 8	3.5	19
91	Automated neuron model optimization techniques: a review. *Biological Cybernetics*, **2008**, 99, 241-51	2.8	100
90	A European Collaboration on Cerebellar LTD and Pattern Recognition **2008**, 19-22		
89	Computational reconstruction of pacemaking and intrinsic electroresponsiveness in cerebellar Golgi cells. *Frontiers in Cellular Neuroscience*, **2007**, 1, 2	6.1	75
88	Fast-reset of pacemaking and theta-frequency resonance patterns in cerebellar golgi cells: simulations of their impact in vivo. *Frontiers in Cellular Neuroscience*, **2007**, 1, 4	6.1	89
87	Neurofitter: a parameter tuning package for a wide range of electrophysiological neuron models. *Frontiers in Neuroinformatics*, **2007**, 1, 1	3.9	42
86	Stochastic description of complex and simple spike firing in cerebellar Purkinje cells. *European Journal of Neuroscience*, **2007**, 25, 785-94	3.5	14
85	Mechanism of spontaneous and self-sustained oscillations in networks connected through axo-axonal gap junctions. *European Journal of Neuroscience*, **2007**, 25, 3347-58	3.5	24
84	Neurospaces:Towards automated model partitioning for parallel computers. *Neurocomputing*, **2007** , 70, 2117-2121	5.4	3
83	Interoperability of neuroscience modeling software: current status and future directions. *Neuroinformatics*, **2007**, 5, 127-38	3.2	55
82	Neuroscience leading the way: reviews cascade by the INCF. *Neuroinformatics*, **2007**, 5, 205-6	3.2	2
81	Cerebellar LTD and pattern recognition by Purkinje cells. *Neuron*, **2007**, 54, 121-36	13.9	136

80	Regular patterns in cerebellar Purkinje cell simple spike trains. *PLoS ONE*, **2007**, 2, e485	3.7	93
79	A novel high channel-count system for acute multisite neuronal recordings. *IEEE Transactions on Biomedical Engineering*, **2006**, 53, 1672-7	5	12
78	Complex parameter landscape for a complex neuron model. *PLoS Computational Biology*, **2006**, 2, e94	5	185
77	Anomalous diffusion in Purkinje cell dendrites caused by spines. *Neuron*, **2006**, 52, 635-48	13.9	226
76	Dynamic synchronization of Purkinje cell simple spikes. *Journal of Neurophysiology*, **2006**, 96, 3485-91	3.2	75
75	Dendritic amplification of inhibitory postsynaptic potentials in a model Purkinje cell. *European Journal of Neuroscience*, **2006**, 23, 1207-18	3.5	30
74	Topographical organization of pathways from somatosensory cortex through the pontine nuclei to tactile regions of the rat cerebellar hemispheres. *European Journal of Neuroscience*, **2006**, 24, 2801-12	3.5	32
73	Temporal characteristics of tactile stimuli influence the response profile of cerebellar Golgi cells. *Neuroscience Letters*, **2005**, 390, 156-61	3.3	15
72	Biophysically detailed modelling of microcircuits and beyond. *Trends in Neurosciences*, **2005**, 28, 562-9	13.3	30
71	Microcircuits in action--from CPGs to neocortex. *Trends in Neurosciences*, **2005**, 28, 525-33	13.3	157
70	Deletion of FMR1 in Purkinje cells enhances parallel fiber LTD, enlarges spines, and attenuates cerebellar eyelid conditioning in Fragile X syndrome. *Neuron*, **2005**, 47, 339-52	13.9	327
69	Oscillations in the cerebellar cortex: a prediction of their frequency bands. *Progress in Brain Research*, **2005**, 148, 181-8	2.9	39
68	The effect of NMDA receptors on gain modulation. *Neural Computation*, **2005**, 17, 2531-47	2.9	6
67	Color discrimination involves ventral and dorsal stream visual areas. *Cerebral Cortex*, **2004**, 14, 803-22	5.1	48
66	Effects of variability in anatomical reconstruction techniques on models of synaptic integration by dendrites: a comparison of three Internet archives. *European Journal of Neuroscience*, **2004**, 19, 1257-66	3.5	19
65	Passive models of neurons in the deep cerebellar nuclei: the effect of reconstruction errors. *Neurocomputing*, **2004**, 58-60, 563-568	5.4	13
64	A detailed three-dimensional model of the cerebellar granular layer. *Neurocomputing*, **2004**, 58-60, 587-592	5.4	6
63	Neurospaces parameter handling. *Neurocomputing*, **2004**, 58-60, 1079-1084	5.4	2

62	Resonant synchronization in heterogeneous networks of inhibitory neurons. *Journal of Neuroscience*, **2003**, 23, 10503-14	6.6	75
61	Unraveling the cerebellar cortex: cytology and cellular physiology of large-sized interneurons in the granular layer. *Cerebellum*, **2003**, 2, 290-9	4.3	65
60	Neuroscience data and tool sharing: a legal and policy framework for neuroinformatics. *Neuroinformatics*, **2003**, 1, 149-65	3.2	45
59	NeuroSpaces: separating modeling and simulation. *Neurocomputing*, **2003**, 52-54, 227-231	5.4	12
58	Synchronization of Purkinje cell pairs along the parallel fiber axis: a model. *Neurocomputing*, **2003**, 52-54, 97-102	5.4	12
57	Novelty detection in a Kohonen-like network with a long-term depression learning rule. *Neurocomputing*, **2003**, 52-54, 411-417	5.4	7
56	Involvement of multiple functionally distinct cerebellar regions in visual discrimination: a human functional imaging study. *NeuroImage*, **2003**, 20, 840-54	7.9	19
55	A higher order motion region in human inferior parietal lobule: evidence from fMRI. *Neuron*, **2003**, 40, 631-42	13.9	108
54	Cerebellar cortex: computation by extrasynaptic inhibition?. *Current Biology*, **2002**, 12, R363-5	6.3	19
53	Rank order decoding of temporal parallel fibre input patterns in a complex Purkinje cell model. *Neurocomputing*, **2002**, 44-46, 183-188	5.4	7
52	Modulatory effects of parallel fiber and molecular layer interneuron synaptic activity on purkinje cell responses to ascending segment input: a modeling study. *Journal of Computational Neuroscience*, **2002**, 13, 217-35	1.4	28
51	Neuroinformatics: the integration of shared databases and tools towards integrative neuroscience. *Journal of Integrative Neuroscience*, **2002**, 1, 117-28	1.5	58
50	Localization of 5-HT2A, 5-HT3, 5-HT5A and 5-HT7 receptor-like immunoreactivity in the rat cerebellum. *Journal of Chemical Neuroanatomy*, **2002**, 24, 65-74	3.2	71
49	Peripheral stimuli excite coronal beams of Golgi cells in rat cerebellar cortex. *Neuroscience*, **2002**, 113, 363-73	3.9	26
48	Coding in the granular layer of the cerebellum. *Progress in Brain Research*, **2001**, 130, 279-96	2.9	25
47	Comparing BOLD fMRI signal changes in the awake and anesthetized rat during electrical forepaw stimulation. *Magnetic Resonance Imaging*, **2001**, 19, 821-6	3.3	128
46	Synchronization between patches of local excitation in a cerebellar granular layer model. *Neurocomputing*, **2001**, 38-40, 595-599	5.4	3
45	Long-term depression and recognition of parallel fibre patterns in a multi-compartmental model of a cerebellar Purkinje cell. *Neurocomputing*, **2001**, 38-40, 383-388	5.4	12

44	NEOSIM: Portable large-scale plug and play modelling. *Neurocomputing*, **2001**, 38-40, 1657-1661	5.4	17
43	Morphological and neurochemical differentiation of large granular layer interneurons in the adult rat cerebellum. *Neuroscience*, **2001**, 104, 499-512	3.9	80
42	Computational Neuroscience: More Math Is Needed to Understand the Human Brain **2001**, 381-391		13
41	Rat somatosensory cerebropontocerebellar pathways: spatial relationships of the somatotopic map of the primary somatosensory cortex are preserved in a three-dimensional clustered pontine map. *Journal of Comparative Neurology*, **2000**, 422, 246-66	3.4	57
40	Weak common parallel fibre synapses explain the loose synchrony observed between rat cerebellar golgi cells. *Journal of Physiology*, **2000**, 523 Pt 1, 175-92	3.9	28
39	Precise spike timing of tactile-evoked cerebellar Golgi cell responses: a reflection of combined mossy fiber and parallel fiber activation?. *Progress in Brain Research*, **2000**, 124, 95-106	2.9	27
38	The function of cerebellar Golgi cells revisited. *Progress in Brain Research*, **2000**, 124, 81-93	2.9	46
37	Parallel fibers synchronize spontaneous activity in cerebellar Golgi cells. *Journal of Neuroscience*, **1999**, 19, RC6	6.6	77
36	Functional magnetic resonance imaging of the rat cerebellum during electrical stimulation of the fore- and hindpaw at 7 T **1999**, 3660, 408		
35	Using realistic models to study synaptic integration in cerebellar Purkinje cells. *Reviews in the Neurosciences*, **1999**, 10, 233-45	4.7	18
34	Miniature carrier with six independently moveable electrodes for recording of multiple single-units in the cerebellar cortex of awake rats. *Journal of Neuroscience Methods*, **1999**, 94, 19-26	3	18
33	Cerebellar Golgi cells in the rat: receptive fields and timing of responses to facial stimulation. *European Journal of Neuroscience*, **1999**, 11, 2621-34	3.5	111
32	A patchy horizontal organization of the somatosensory activation of the rat cerebellum demonstrated by functional MRI. *European Journal of Neuroscience*, **1999**, 11, 2720-30	3.5	24
31	Ascending granule cell axon: an important component of cerebellar cortical circuitry. *Journal of Comparative Neurology*, **1999**, 408, 580-96	3.4	105
30	Using Evolutionary Algorithms to Search for Control Parameters in a Nonlinear Partial Differential Equation. *The IMA Volumes in Mathematics and Its Applications*, **1999**, 33-64	0.5	4
29	Synchronization of golgi and granule cell firing in a detailed network model of the cerebellar granule cell layer. *Journal of Neurophysiology*, **1998**, 80, 2521-37	3.2	182
28	Dendritic voltage and calcium-gated channels amplify the variability of postsynaptic responses in a Purkinje cell model. *Journal of Neurophysiology*, **1998**, 80, 504-19	3.2	39
27	The Critical Synaptic Number for Rhythmogenesis and Synchronization in a Network Model of the Cerebellar Granular Layer. *Perspectives in Neural Computing*, **1998**, 361-366		2

26	Speeding Up GENESIS Simulations **1998**, 329-347		2
25	A new functional role for cerebellar long-term depression. *Progress in Brain Research*, **1997**, 114, 529-42	2.9	29
24	Anatomical structure alone cannot predict function. *Behavioral and Brain Sciences*, **1997**, 20, 252-253	0.9	1
23	The role of synaptic and voltage-gated currents in the control of Purkinje cell spiking: a modeling study. *Journal of Neuroscience*, **1997**, 17, 91-106	6.6	138
22	The cerebellum: cortical processing and theory. *Current Opinion in Neurobiology*, **1996**, 6, 759-64	7.6	29
21	One cannot build theories of cerebellar function on shaky foundations: Induction properties of long-term depression have to be taken into account. *Behavioral and Brain Sciences*, **1996**, 19, 440-441	0.9	2
20	Modeling the leech heartbeat elemental oscillator. I. Interactions of intrinsic and synaptic currents. *Journal of Computational Neuroscience*, **1995**, 2, 215-35	1.4	100
19	Cerebellar long-term depression might normalize excitation of Purkinje cells: a hypothesis. *Trends in Neurosciences*, **1995**, 18, 291-5	13.3	179
18	An active membrane model of the cerebellar Purkinje cell II. Simulation of synaptic responses. *Journal of Neurophysiology*, **1994**, 71, 401-19	3.2	228
17	An active membrane model of the cerebellar Purkinje cell. I. Simulation of current clamps in slice. *Journal of Neurophysiology*, **1994**, 71, 375-400	3.2	348
16	Voltage-imaging and simulation of effects of voltage- and agonist-activated conductances on soma-dendritic voltage coupling in cerebellar Purkinje cells. *Journal of Computational Neuroscience*, **1994**, 1, 301-11	1.4	13
15	Modelling the cerebellar Purkinje cell: experiments in computo. *Progress in Brain Research*, **1994**, 102, 427-41	2.9	11
14	Simulated responses of cerebellar Purkinje cells are independent of the dendritic location of granule cell synaptic inputs. *Proceedings of the National Academy of Sciences of the United States of America*, **1994**, 91, 4736-40	11.5	151
13	Sensitivity of Synaptic Plasticity to the Ca2+ Permeability of NMDA Channels: A Model of Long-Term Potentiation in Hippocampal Neurons. *Neural Computation*, **1993**, 5, 681-694	2.9	7
12	Modeling a Neural Oscillator that Paces Heartbeat in the Medicinal Leech. *American Zoologist*, **1993**, 33, 16-28		3
11	A model of graded synaptic transmission for use in dynamic network simulations. *Journal of Neurophysiology*, **1993**, 69, 1225-35	3.2	27
10	Motor-pattern-generating networks in invertebrates: modeling our way toward understanding. *Trends in Neurosciences*, **1992**, 15, 439-45	13.3	38
9	A consumer guide to neuronal modeling software. *Trends in Neurosciences*, **1992**, 15, 462-464	13.3	43

8	Computer software for development and simulation of compartmental models of neurons. *Computers in Biology and Medicine*, **1989**, 19, 71-81	7	33
7	Spinal neuroaxonal dystrophy and angioneuromatosis. *Acta Neuropathologica*, **1987**, 73, 19-24	14.3	1
6	Alternative equations for the molluscan ion currents described by Connor and Stevens. *Brain Research*, **1986**, 382, 134-8	3.7	8
5	Identification of several forms of the glial fibrillary acidic protein, or alpha-albumin, by a specific monoclonal antibody. *Journal of Neurochemistry*, **1984**, 43, 964-70	6	26
4	Cerebrospinal fluid proteins in neurology. *International Review of Neurobiology*, **1984**, 25, 95-138	4.4	14
3	Non-curated distributed databases for experimental data and models in neuroscience		11
2	Lamina-specific neuronal properties promote robust, stable signal propagation in feedforward networks		2
1	Astrocyte nanoscale morphology controls Ca2+ signals at tripartite synapses		2