Volker Steuber

List of Publications by Year in Descending Order

84 papers	2,217 citations	23 h-index	46 g-index
101 ext. papers	2,713 ext. citations	4 avg, IF	4.87 L-index

#	Paper	IF	Citations
84	EEG Spectral Feature Modulations Associated With Fatigue in Robot-Mediated Upper Limb Gross and Fine Motor Interactions.. *Frontiers in Neurorobotics*, **2021**, 15, 788494	3.4	0
83	The beta component of gamma-band auditory steady-state responses in patients with schizophrenia. *Scientific Reports*, **2021**, 11, 20387	4.9	0
82	Embodiment and Its Influence on Informational Costs of Decision Density-Atomic Actions vs. Scripted Sequences. *Frontiers in Robotics and AI*, **2021**, 8, 535158	2.8	
81	Growth rules for the repair of Asynchronous Irregular neuronal networks after peripheral lesions. *PLoS Computational Biology*, **2021**, 17, e1008996	5	0
80	Binding of Filamentous Actin to CaMKII as Potential Regulation Mechanism of Bidirectional Synaptic Plasticity by □CaMKII in Cerebellar Purkinje Cells. *Scientific Reports*, **2020**, 10, 9019	4.9	1
79	Adaptive robot mediated upper limb training using electromyogram-based muscle fatigue indicators. *PLoS ONE*, **2020**, 15, e0233545	3.7	5
78	Influence of muscle fatigue on electromyogram-kinematic correlation during robot-assisted upper limb training. *Journal of Rehabilitation and Assistive Technologies Engineering*, **2020**, 7, 2055668320903014	1.7	2
77	Modules for Automated Validation and Comparison of Models of Neurophysiological and Neurocognitive Biomarkers of Psychiatric Disorders: ASSRUnit□A Case Study. *Computational Psychiatry*, **2020**, 2, 74	3.8	5
76	Hand Gesture Based Gameplay with a Smoothie Maker Game Using Myo Armband. *Lecture Notes in Computer Science*, **2019**, 388-398	0.9	
75	The Importance of Self-excitation in Spiking Neural Networks Evolved to Recognize Temporal Patterns. *Lecture Notes in Computer Science*, **2019**, 758-771	0.9	
74	The Role of Parvalbumin-positive Interneurons in Auditory Steady-State Response Deficits in Schizophrenia. *Scientific Reports*, **2019**, 9, 18525	4.9	5
73	Spiking Neural Network Controllers Evolved for Animat Foraging Based on Temporal Pattern Recognition in the Presence of Noise on Input. *Lecture Notes in Computer Science*, **2018**, 304-313	0.9	
72	Spiking Neural Networks Evolved to Perform Multiplicative Operations. *Lecture Notes in Computer Science*, **2018**, 314-321	0.9	1
71	Nonspecific synaptic plasticity improves the recognition of sparse patterns degraded by local noise. *Scientific Reports*, **2017**, 7, 46550	4.9	4
70	26th Annual Computational Neuroscience Meeting (CNS*2017): Part 3. *BMC Neuroscience*, **2017**, 18,	3.2	2
69	Review of combinations of experimental and computational techniques to identify and understand genes involved in innate immunity and effector-triggered defence. *Methods*, **2017**, 131, 120-127	4.6	11
68	Evolving spiking neural networks to control animats for temporal pattern recognition and foraging **2017**,		1

67	Distinctive role of KV1.1 subunit in the biology and functions of low threshold K(+) channels with implications for neurological disease. *Pharmacology & Therapeutics*, **2016**, 159, 93-101	13.9	31
66	Modeling the Generation of Cerebellar Nuclear Spike Output **2016**, 117-133		
65	25th Annual Computational Neuroscience Meeting: CNS-2016. *BMC Neuroscience*, **2016**, 17 Suppl 1, 54	3.2	38
64	Dendritic morphology predicts pattern recognition performance in multi-compartmental model neurons with and without active conductances. *Journal of Computational Neuroscience*, **2015**, 38, 221-34	1.4	13
63	Cerebellar output controls generalized spike-and-wave discharge occurrence. *Annals of Neurology*, **2015**, 77, 1027-49	9.4	88
62	Evolving small spiking neural networks to work as state machines for temporal pattern recognition. *BMC Neuroscience*, **2015**, 16,	3.2	1
61	Optimization of input parameters to a CN neuron model to simulate its activity during and between epileptic absence seizures. *BMC Neuroscience*, **2015**, 16,	3.2	78
60	Animal control by spiking neural networks evolved with a genetic algorithm. *BMC Neuroscience*, **2015**, 16,	3.2	78
59	Structural plasticity and associative memory in balanced neural networks with spike-time dependent inhibitory plasticity. *BMC Neuroscience*, **2015**, 16,	3.2	78
58	Using transfer entropy to study synaptic integration in Purkinje cells. *BMC Neuroscience*, **2015**, 16,	3.2	78
57	Synaptic Plasticity and Pattern Recognition in Cerebellar Purkinje Cells. *Springer Series in Computational Neuroscience*, **2014**, 433-448	1.1	2
56	Determinants of gain modulation enabled by short-term depression at an inhibitory cerebellar synapse. *BMC Neuroscience*, **2014**, 15,	3.2	78
55	Combining machine learning and simulations of a morphologically realistic model to study modulation of neuronal activity in cerebellar nuclei during absence epilepsy. *BMC Neuroscience*, **2014**, 15,	3.2	1
54	Information theoretical analysis of differences in information transmission in cerebellar Purkinje cells across species. *BMC Neuroscience*, **2014**, 15,	3.2	78
53	From evolving artificial gene regulatory networks to evolving spiking neural networks for pattern recognition. *BMC Neuroscience*, **2013**, 14,	3.2	78
52	Short-term depression of inhibitory Purkinje cell synapses enhances gain modulation in the cerebellar nuclei. *BMC Neuroscience*, **2013**, 14,	3.2	1
51	A potential role for the cerebellar nuclei in absence seizures. *BMC Neuroscience*, **2013**, 14,	3.2	3
50	Interoperability in the GENESIS 3.0 Software Federation: the NEURON Simulator as an Example. *BMC Neuroscience*, **2013**, 14,	3.2	78

49	Characterising the performance of balanced memory networks. *BMC Neuroscience*, **2013**, 14,	3.2	78
48	The implications of evolutionary changes in the dendritic morphology of cerebellar Purkinje cells for information processing. *BMC Neuroscience*, **2013**, 14,	3.2	1
47	Modeling the generation of output by the cerebellar nuclei. *Neural Networks*, **2013**, 47, 112-9	9.1	23
46	An integrator circuit in cerebellar cortex. *European Journal of Neuroscience*, **2013**, 38, 2917-32	3.5	9
45	A defined heteromeric KV1 channel stabilizes the intrinsic pacemaking and regulates the output of deep cerebellar nuclear neurons to thalamic targets. *Journal of Physiology*, **2013**, 591, 1771-91	3.9	14
44	Evolution of Dendritic Morphologies Using Deterministic and Nondeterministic Genotype to Phenotype Mapping. *Lecture Notes in Computer Science*, **2013**, 319-326	0.9	
43	The Open Source Brain Initiative: enabling collaborative modelling in computational neuroscience. *BMC Neuroscience*, **2012**, 13,	3.2	9
42	Determinants of associative memory performance in spiking and non-spiking neural networks with different synaptic plasticity regimes. *BMC Neuroscience*, **2012**, 13,	3.2	1
41	Creating, documenting and sharing network models. *Network: Computation in Neural Systems*, **2012** , 23, 131-49	0.7	12
40	NeuroML **2012**, 489-517		2
39	The Effective Calcium/Calmodulin Concentration Determines the Sensitivity of CaMKII to the Frequency of Calcium Oscillations. *Lecture Notes in Computer Science*, **2012**, 131-135	0.9	1
38	The Effect of Different Types of Synaptic Plasticity on the Performance of Associative Memory Networks with Excitatory and Inhibitory Sub-populations. *Lecture Notes in Computer Science*, **2012**, 136-142	0.9	
37	Evolving Dendritic Morphology and Parameters in Biologically Realistic Model Neurons for Pattern Recognition. *Lecture Notes in Computer Science*, **2012**, 355-362	0.9	1
36	Transtibial versus anteromedial portal reaming in anterior cruciate ligament reconstruction: an anatomic and biomechanical evaluation of surgical technique. *Arthroscopy - Journal of Arthroscopic and Related Surgery*, **2011**, 27, 380-90	5.4	232
35	Clustering predicts memory performance in networks of spiking and non-spiking neurons. *Frontiers in Computational Neuroscience*, **2011**, 5, 14	3.5	6
34	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
33	STD-dependent and independent encoding of input irregularity as spike rate in a computational model of a cerebellar nucleus neuron. *Cerebellum*, **2011**, 10, 667-82	4.3	22
32	Non-specific LTD at parallel fibre - Purkinje cell synapses in cerebellar cortex provides robustness against local spatial noise during pattern recognition. *BMC Neuroscience*, **2011**, 12,	3.2	1

31	The effect of dendritic morphology on pattern recognition in the presence of active conductances. *BMC Neuroscience*, **2011**, 12,	3.2	1
30	The beneficial effects of non-specific synaptic plasticity for pattern recognition in auto-associative memory. *BMC Neuroscience*, **2011**, 12,	3.2	78
29	The effect of non-specific LTD on pattern recognition in cerebellar Purkinje cells. *BMC Neuroscience* , **2010**, 11,	3.2	3
28	Optimization of neuronal morphologies for pattern recognition. *BMC Neuroscience*, **2010**, 11,	3.2	1
27	Evolution of bistable dynamics in spiking neural controllers for agents performing olfactory attraction and aversion. *BMC Neuroscience*, **2010**, 11,	3.2	78
26	Computer Simulation Environments **2010**, 593-609		1
25	Evolution of bilateral symmetry in agents controlled by spiking neural networks **2009**,		5
24	Decoding of Purkinje cell pauses by deep cerebellar nucleus neurons. *BMC Neuroscience*, **2009**, 10,	3.2	3
23	Synaptic depression enables neuronal gain control. *Nature*, **2009**, 457, 1015-8	50.4	166
22	The first second: models of short-term memory traces in the brain. *Neural Networks*, **2009**, 22, 1105-12	9.1	10
21	Patterns and pauses in Purkinje cell simple spike trains: experiments, modeling and theory. *Neuroscience*, **2009**, 162, 816-26	3.9	80
20	Connection Strategies in Associative Memory Models with Spiking and Non-spiking Neurons. *Lecture Notes in Computer Science*, **2009**, 42-51	0.9	
19	The Effect of Different Forms of Synaptic Plasticity on Pattern Recognition in the Cerebellar Cortex. *Lecture Notes in Computer Science*, **2009**, 413-422	0.9	4
18	Connectivity graphs and the performance of sparse associative memory models **2008**,		1
17	Using Neuroconstruct to Develop and Modify Biologically Detailed 3D Neuronal Network Models in Health and Disease **2008**, 48-V		
16	A European Collaboration on Cerebellar LTD and Pattern Recognition **2008**, 19-22		
15	Adaptive Olfactory Encoding in Agents Controlled by Spiking Neural Networks. *Lecture Notes in Computer Science*, **2008**, 148-158	0.9	1
14	Computational Intelligence in Electrophysiology: Trends and Open Problems. *Studies in Computational Intelligence*, **2008**, 325-359	0.8	2

13	Using NeuroML and neuroConstruct to build neuronal network models for multiple simulators. *BMC Neuroscience*, **2007**, 8,	3.2	1
12	Cerebellar LTD and pattern recognition by Purkinje cells. *Neuron*, **2007**, 54, 121-36	13.9	136
11	neuroConstruct: a tool for modeling networks of neurons in 3D space. *Neuron*, **2007**, 54, 219-35	13.9	162
10	Generation of time delays: simplified models of intracellular signalling in cerebellar Purkinje cells. *Network: Computation in Neural Systems*, **2006**, 17, 173-91	0.7	7
9	Passive models of neurons in the deep cerebellar nuclei: the effect of reconstruction errors. *Neurocomputing*, **2004**, 58-60, 563-568	5.4	13
8	A biophysical model of synaptic delay learning and temporal pattern recognition in a cerebellar Purkinje cell. *Journal of Computational Neuroscience*, **2004**, 17, 149-64	1.4	31
7	Rank order decoding of temporal parallel fibre input patterns in a complex Purkinje cell model. *Neurocomputing*, **2002**, 44-46, 183-188	5.4	7
6	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
5	Adaptive leaky integrator models of cerebellar Purkinje cells can learn the clustering of temporal patterns. *Neurocomputing*, **1999**, 26-27, 271-276	5.4	10
4	How a single Purkinje cell could learn the adaptive timing of the classically conditioned eye-blink response. *Lecture Notes in Computer Science*, **1997**, 115-120	0.9	2
3	Structural features of a close homologue of L1 (CHL1) in the mouse: a new member of the L1 family of neural recognition molecules. *European Journal of Neuroscience*, **1996**, 8, 1613-29	3.5	95
2	The Effect of Alterations of Schizophrenia-Associated Genes on Gamma Band Oscillations		1
1	EEG Spectral Feature Modulations Associated with Fatigue in Robot-Mediated Upper Limb Gross Motor and Fine Motor Interactions		1