Jeanette Hellgren Kotaleski

List of Publications by Year
in descending order

44 papers	1,423 citations	361413 20 h-index	377865 34 g-index
53 all docs	53 docs citations	53 times ranked	1632 citing authors

#	Article	IF	Citations
1	Modelling the molecular mechanisms of synaptic plasticity using systems biology approaches. Nature Reviews Neuroscience, 2010, 11, 239-251.	10.2	165
2	Transient Calcium and Dopamine Increase PKA Activity and DARPP-32 Phosphorylation. PLoS Computational Biology, 2006, 2, e119.	3.2	97
3	Gap Junctions between Striatal Fast-Spiking Interneurons Regulate Spiking Activity and Synchronization as a Function of Cortical Activity. Journal of Neuroscience, 2009, 29, 5276-5286.	3.6	95
4	Run-Time Interoperability Between Neuronal Network Simulators Based on the MUSIC Framework. Neuroinformatics, 2010, 8, 43-60.	2.8	88
5	Detection of phasic dopamine by D1 and D2 striatal medium spiny neurons. Journal of Physiology, 2017, 595, 7451-7475.	2.9	82
6	The microcircuits of striatum in silico. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 9554-9565.	7.1	69
7	Cell-typeâ€“specific inhibition of the dendritic plateau potential in striatal spiny projection neurons. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E7612-E7621.	7.1	53
8	Sensing Positive versus Negative Reward Signals through Adenylyl Cyclase-Coupled GPCRs in Direct and Indirect Pathway Striatal Medium Spiny Neurons. Journal of Neuroscience, 2015, 35, 14017-14030.	3.6	52
9	Untangling Basal Ganglia Network Dynamics and Function: Role of Dopamine Depletion and Inhibition Investigated in a Spiking Network Model. ENeuro, 2016, 3, ENEURO.0156-16.2016.	1.9	49
10	Neural mechanisms potentially contributing to the intersegmental phase lag in lamprey. Biological Cybernetics, 1999, 81, 299-315.	1.3	48
11	Postsynaptic Signal Transduction Models for Long-Term Potentiation and Depression. Frontiers in Computational Neuroscience, 2010, 4, 152.	2.1	46
12	Neural mechanisms potentially contributing to the intersegmental phase lag in lamprey. Biological Cybernetics, 1999, 81, 317-330.	1.3	43
13	Untangling Cortico-Striatal Connectivity and Cross-Frequency Coupling in L-DOPA-Induced Dyskinesia. Frontiers in Systems Neuroscience, 2016, 10, 26.	2.5	38
14	Basal Ganglia Neuromodulation Over Multiple Temporal and Structural Scalesâ€"Simulations of Direct Pathway MSNs Investigate the Fast Onset of Dopaminergic Effects and Predict the Role of Kv4.2. Frontiers in Neural Circuits, 2018, 12, 3.	2.8	34
15	Roles for globus pallidus externa revealed in a computational model of action selection in the basal ganglia. Neural Networks, 2019, 109, 113-136.	5.9	34
16	Striatal Fast-Spiking Interneurons: From Firing Patterns to Postsynaptic Impact. Frontiers in Systems Neuroscience, 2011, 5, 57.	2.5	32
17	Role of DARPP-32 and ARPP-21 in the Emergence of Temporal Constraints on Striatal Calcium and Dopamine Integration. PLoS Computational Biology, 2016, 12, e1005080.	3.2	29
18	Modeling of substance P and 5-HT induced synaptic plasticity in the lamprey spinal CPG: consequences for network pattern generation. Journal of Computational Neuroscience, 2001, 11, 183-200.	1.0	27

#	Article	IF	Citations
19	A Standards Organization for Open and FAIR Neuroscience: the International Neuroinformatics Coordinating Facility. Neuroinformatics, 2022, 20, 25-36.	2.8	26
20	Signal enhancement in the output stage of the basal ganglia by synaptic short-term plasticity in the direct, indirect, and hyperdirect pathways. Frontiers in Computational Neuroscience, 2013, 7, 76.	2.1	24
21	Modeling of the Spinal Neuronal Circuitry Underlying Locomotion in a Lower Vertebratea. Annals of the New York Academy of Sciences, 1998, 860, 239-249.	3.8	23
22	A single Markov-type kinetic model accounting for the macroscopic currents of all human voltage-gated sodium channel isoforms. PLoS Computational Biology, 2017, 13, e1005737.	3.2	23
23	Uncertainty quantification, propagation and characterization by Bayesian analysis combined with global sensitivity analysis applied to dynamical intracellular pathway models. Bioinformatics, 2019, 35, 284-292.	4.1	22
24	Segregation and Crosstalk of D1 Receptor-Mediated Activation of ERK in Striatal Medium Spiny Neurons upon Acute Administration of Psychostimulants. PLoS Computational Biology, 2014, 10, e1003445.	3.2	21
25	A Diffusive Homeostatic Signal Maintains Neural Heterogeneity and Responsiveness in Cortical Networks. PLoS Computational Biology, 2015, 11, e1004389.	3.2	21
26	Molecular mechanisms underlying striatal synaptic plasticity: relevance to chronic alcohol consumption and seeking. European Journal of Neuroscience, 2019, 49, 768-783.	2.6	19
27	Modelling and sensitivity analysis of the reactions involving receptor, G-protein and effector in vertebrate olfactory receptor neurons. Journal of Computational Neuroscience, 2009, 27, 471-491.	1.0	16
28	Regulation of adenylyl cyclase 5 in striatal neurons confers the ability to detect coincident neuromodulatory signals. PLoS Computational Biology, 2019, 15, e1007382.	3.2	16
29	Basal Gangliaâ€"A Motion Perspective. , 2020, 10, 1241-1275.		16
30	Combining hypothesis- and data-driven neuroscience modeling in FAIR workflows. ELife, 0, 11, .	6.0	15
31	Homologous Basal Ganglia Network Models in Physiological and Parkinsonian Conditions. Frontiers in Computational Neuroscience, 2017, 11, 79.	2.1	14
32	Switch-like PKA responses in the nucleus of striatal neurons. Journal of Cell Science, 2018, 131, .	2.0	14
33	Predicting complex spikes in striatal projection neurons of the direct pathway following neuromodulation by acetylcholine and dopamine. European Journal of Neuroscience, 2021, 53, 2117-2134.	2.6	11
34	Interplay between periodic stimulation and GABAergic inhibition in striatal network oscillations. PLoS ONE, 2017, 12, e0175135.	2.5	10
35	Reciprocal interaction between striatal cholinergic and lowâ€threshold spiking interneurons â€" A computational study. European Journal of Neuroscience, 2021, 53, 2135-2148.	2.6	10
36	Transient Response of Basal Ganglia Network in Healthy and Low-Dopamine State. ENeuro, 2022, 9, ENEURO.0376-21.2022.	1.9	8

#	Article	IF	Citations
37	AKAP79 enables calcineurin to directly suppress protein kinase A activity. ELife, 2021, 10, .	6.0	6
38	Efficient Integration of Coupled Electrical-Chemical Systems in Multiscale Neuronal Simulations. Frontiers in Computational Neuroscience, 2016, 10, 97.	2.1	5
39	Predicting Synaptic Connectivity for Large-Scale Microcircuit Simulations Using Snudda. Neuroinformatics, 2021, 19, 685-701.	2.8	5
40	A Modular Workflow for Model Building, Analysis, and Parameter Estimation in Systems Biology and Neuroscience. Neuroinformatics, 2022, 20, 241-259.	2.8	3
41	Multirate method for co-simulation of electrical-chemical systems in multiscale modeling. Journal of Computational Neuroscience, 2017, 42, 245-256.	1.0	2
42	Data-Driven Model of Postsynaptic Currents Mediated by NMDA or AMPA Receptors in Striatal Neurons. Frontiers in Computational Neuroscience, 2022, 16, .	2.1	2
43	Multiscale molecular simulations to investigate adenylyl cyclaseâ€based signaling in the brain. Wiley Interdisciplinary Reviews: Computational Molecular Science, 0, , .	14.6	2
44	Dopaminergic and Cholinergic Modulation of Large Scale Networks in silico Using Snudda. Frontiers in Neural Circuits, 2021, 15, 748989.	2.8	1