# Felix SchÃ¼rmann

List of Publications by Year
in descending order



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|---|---|---|---|
| 44 papers | 3,511 citations | 279701 23 h-index | 265120 42 g-index |
| 48 all docs | 48 docs citations | 48 times ranked | 3207 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Representing stimulus information in an energy metabolism pathway. Journal of Theoretical Biology, 2022, 540, 111090. | 0.8 | 2 |
| 2 | Computational Concepts for Reconstructing and Simulating Brain Tissue. Advances in Experimental Medicine and Biology, 2022, 1359, 237-259. | 0.8 | 2 |
| 3 | Reconstruction of the Hippocampus. Advances in Experimental Medicine and Biology, 2022, 1359, 261-283. | 0.8 | 10 |
| 4 | Die Welt im Meer. WerkstattGeschichte, 2021, 83, 69-84. | 0.0 | 0 |
| 5 | Metaball skinning of synthetic astroglial morphologies into realistic mesh models for <i>in silico</i> simulations and visual analytics. Bioinformatics, 2021, 37, i426-i433. | 1.8 | 6 |
| 6 | Excitation states of metabolic networks predict dose-response fingerprinting and ligand pulse phase signalling. Journal of Theoretical Biology, 2020, 487, 110123. | 0.8 | 3 |
| 7 | Understanding Computational Costs of Cellular-Level Brain Tissue Simulations Through Analytical Performance Models. Neuroinformatics, 2020, 18, 407-428. | 1.5 | 8 |
| 8 | An efficient analytical reduction of detailed nonlinear neuron models. Nature Communications, 2020, 11, 288. | 5.8 | 22 |
| 9 | Analytic performance modeling and analysis of detailed neuron simulations. International Journal of High Performance Computing Applications, 2020, 34, 428-449. | 2.4 | 9 |
| 10 | An Optimizing Multi-platform Source-to-source Compiler Framework for the NEURON MODeling Language. Lecture Notes in Computer Science, 2020, , 45-58. | 1.0 | 5 |
| 11 | CoreNEURON : An Optimized Compute Engine for the NEURON Simulator. Frontiers in Neuroinformatics, 2019, 13, 63. | 1.3 | 58 |
| 12 | Asynchronous Branch-Parallel Simulation of Detailed Neuron Models. Frontiers in Neuroinformatics, 2019, 13, 54. | 1.3 | 4 |
| 13 | Fully-Asynchronous Cache-Efficient Simulation of Detailed Neural Networks. Lecture Notes in Computer Science, 2019, , 421-434. | 1.0 | 2 |
| 14 | The Scientific Case for Brain Simulations. Neuron, 2019, 102, 735-744. | 3.8 | 123 |
| 15 | The physiological variability of channel density in hippocampal CA1 pyramidal cells and interneurons explored using a unified data-driven modeling workflow. PLoS Computational Biology, 2018, 14, e1006423. | 1.5 | 91 |
| 16 | Norepinephrine stimulates glycogenolysis in astrocytes to fuel neurons with lactate. PLoS Computational Biology, 2018, 14, e1006392. | 1.5 | 47 |
| 17 | NeuroMorphoVis: a collaborative framework for analysis and visualization of neuronal morphology skeletons reconstructed from microscopy stacks. Bioinformatics, 2018, 34, i574-i582. | 1.8 | 43 |
| 18 | Bio-physically plausible visualization of highly scattering fluorescent neocortical models for in silico experimentation. BMC Bioinformatics, 2017, 18, 62. | 1.2 | 14 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Single Neuron Optimization as a Basis for Accurate Biophysical Modeling: The Case of Cerebellar Granule Cells. Frontiers in Cellular Neuroscience, 2017, 11, 71. | 1.8 | 36 |
| 20 | Reconstruction and visualization of large-scale volumetric models of neocortical circuits for physically-plausible in silico optical studies. BMC Bioinformatics, 2017, 18, 402. | 1.2 | 9 |
| 21 | BluePyOpt: Leveraging Open Source Software and Cloud Infrastructure to Optimise Model Parameters in Neuroscience. Frontiers in Neuroinformatics, 2016, 10, 17. | 1.3 | 138 |
| 22 | Simulation Neurotechnologies for Advancing Brain Research: Parallelizing Large Networks in NEURON. Neural Computation, 2016, 28, 2063-2090. | 1.3 | 40 |
| 23 | The neocortical microcircuit collaboration portal: a resource for rat somatosensory cortex. Frontiers in Neural Circuits, 2015, 9, 44. | 1.4 | 138 |
| 24 | Performance evaluation of the IBM POWER8 architecture to support computational neuroscientific application using morphologically detailed neurons. , 2015, , . |  | 10 |
| 25 | An Exclusion Zone for Ca2+ Channels around Docked Vesicles Explains Release Control by Multiple Channels at a CNS Synapse. PLoS Computational Biology, 2015, 11, e1004253. | 1.5 | 49 |
| 26 | Reconstruction and Simulation of Neocortical Microcircuitry. Cell, 2015, 163, 456-492. | 13.5 | 1,258 |
| 27 | Preserving axosomatic spiking features despite diverse dendritic morphology. Journal of Neurophysiology, 2013, 109, 2972-2981. | 0.9 | 64 |
| 28 | Intrinsic morphological diversity of thickâ€tufted layer 5 pyramidal neurons ensures robust and invariant properties of <i>in silico</i> synaptic connections. Journal of Physiology, 2012, 590, 737-752. | 1.3 | 44 |
| 29 | Statistical connectivity provides a sufficient foundation for specific functional connectivity in neocortical neural microcircuits. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, E2885-94. | 3.3 | 178 |
| 30 | Combinatorial Expression Rules of Ion Channel Genes in Juvenile Rat (Rattus norvegicus) Neocortical Neurons. PLoS ONE, 2012, 7, e34786. | 1.1 | 14 |
| 31 | Comparison of neuronal spike exchange methods on a Blue Gene/P supercomputer. Frontiers in Computational Neuroscience, 2011, 5, 49. | 1.2 | 42 |
| 32 | Channelpedia: An Integrative and Interactive Database for Ion Channels. Frontiers in Neuroinformatics, 2011, 5, 36. | 1.3 | 65 |
| 33 | Models of Neocortical Layer 5b Pyramidal Cells Capturing aÂWide Range of Dendritic and Perisomatic Active Properties. PLoS Computational Biology, 2011, 7, e1002107. | 1.5 | 313 |
| 34 | Effective Stimuli for Constructing Reliable Neuron Models. PLoS Computational Biology, 2011, 7, e1002133. | 1.5 | 49 |
| 35 | A Component-Based Extension Framework for Large-Scale Parallel Simulations in NEURON. Frontiers in Neuroinformatics, 2009, 3, 10. | 1.3 | 18 |
| 36 | Neuron splitting in compute-bound parallel network simulations enables runtime scaling with twice as many processors. Journal of Computational Neuroscience, 2008, 25, 203-210. | 0.6 | 47 |

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|---|---|---|---|
| 37 | Fully implicit parallel simulation of single neurons. Journal of Computational Neuroscience, 2008, 25, 439-448. | 0.6 | 76 |
| 38 | The quantitative single-neuron modeling competition. Biological Cybernetics, 2008, 99, 417-426. | 0.6 | 103 |
| 39 | Evaluating automated parameter constraining procedures of neuron models by experimental and surrogate data. Biological Cybernetics, 2008, 99, 371-379. | 0.6 | 53 |
| 40 | Special issue on quantitative neuron modeling. Biological Cybernetics, 2008, 99, 237-239. | 0.6 | 12 |
| 41 | A novel multiple objective optimization framework for constraining conductance-based neuron models by experimental data. Frontiers in Neuroscience, 2007, 1, 7-18. | 1.4 | 260 |
| 42 | Fully implicit parallel simulation of single neurons. BMC Neuroscience, 2007, 8, . | 0.8 | 1 |
| 43 | A Mixed-Mode Analog Neural Network Using Current-Steering Synapses. Analog Integrated Circuits and Signal Processing, 2004, 38, 233-244. | 0.9 | 17 |
| 44 | Modernizing the NEURON Simulator for Sustainability, Portability, and Performance. Frontiers in Neuroinformatics, 0, 16, . | 1.3 | 16 |