

Resource Summary Report

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Neural Ensemble - NeuroTools

RRID:SCR_001806

Type: Tool

Proper Citation

Neural Ensemble - NeuroTools (RRID:SCR_001806)

Resource Information

URL: <https://github.com/NeuralEnsemble/NeuroTools>

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Description: Collection of tools to support all tasks associated with a neural simulation project, which are not handled by the simulation engine. NeuroTools is written in Python and works best with PyNN and other simulation engines with a Python front-end such as NEURON, NEST, PCSIM, BrainScaleS Neuromorphic VLSI, Brian, MOOSE/GENESIS, and Neurospaces/GENESIS. NeuroTools provides modules to facilitate simulation setup, parameterization, data management, analysis and visualization. The data-related tools are equally suited to analysis of experimental data.

Synonyms: Neuro Tools, NeuroTools

Resource Type: software resource, software toolkit

Keywords: neuron, simulation, neural simulation project, python, ensemble, toolkit, module

Funding: European Union FACETS IST-2005-15879

Availability: GNU General Public License

Resource Name: Neural Ensemble - NeuroTools

Resource ID: SCR_001806

Alternate IDs: nif-0000-10372

Alternate URLs: <http://neuralensemble.org/trac/NeuroTools>

Record Creation Time: 20220129T080209+0000

Record Last Update: 20260905T133225+0000

Ratings and Alerts

No rating or validation information has been found for Neural Ensemble - NeuroTools.

No alerts have been found for Neural Ensemble - NeuroTools.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 11 mentions in open access literature.

Listed below are recent publications. The full list is available at [Kravitz](#) .

Bingham D, et al. (2023) Presynapses contain distinct actin nanostructures. The Journal of cell biology, 222(10).

Hagen E, et al. (2018) Multimodal Modeling of Neural Network Activity: Computing LFP, ECoG, EEG, and MEG Signals With LFPy 2.0. Frontiers in neuroinformatics, 12, 92.

Heiberg T, et al. (2018) Firing-rate models for neurons with a broad repertoire of spiking behaviors. Journal of computational neuroscience, 45(2), 103.

Heiberg T, et al. (2016) Biophysical Network Modelling of the dLGN Circuit: Different Effects of Triadic and Axonal Inhibition on Visual Responses of Relay Cells. PLoS computational biology, 12(5), e1004929.

Kremkow J, et al. (2016) Push-Pull Receptive Field Organization and Synaptic Depression: Mechanisms for Reliably Encoding Naturalistic Stimuli in V1. Frontiers in neural circuits, 10, 37.

Hagen E, et al. (2016) Hybrid Scheme for Modeling Local Field Potentials from Point-Neuron Networks. Cerebral cortex (New York, N.Y. : 1991), 26(12), 4461.

Mattioni M, et al. (2013) Integration of biochemical and electrical signaling-multiscale model of the medium spiny neuron of the striatum. PloS one, 8(7), e66811.

Garcia S, et al. (2009) OpenElectrophy: An Electrophysiological Data- and Analysis-Sharing Framework. Frontiers in neuroinformatics, 3, 14.

Pecevski D, et al. (2009) PCSIM: A Parallel Simulation Environment for Neural Circuits Fully Integrated with Python. Frontiers in neuroinformatics, 3, 11.

Bednar JA, et al. (2009) Topographica: Building and Analyzing Map-Level Simulations from Python, C/C++, MATLAB, NEST, or NEURON Components. Frontiers in neuroinformatics, 3, 8.

Br??derle D, et al. (2009) Establishing a novel modeling tool: a python-based interface for a neuromorphic hardware system. Frontiers in neuroinformatics, 3, 17.