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: 20250513T060344+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 FDI Lab - SciCrunch.org.

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.

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.

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.

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.

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