Resource Summary Report

Generated by PRECISE-TBI on Sep 8, 2026

LFPy

RRID:SCR_014805
Type: Tool

Proper Citation

LFPy (RRID:SCR_014805)

Resource Information

URL: http://lfpy.github.io

Proper Citation: LFPy (RRID:SCR_014805)

Description: Python package for calculation of extracellular potentials from multicompartment neuron models. LFPy can be used to set up a model, run simulations, and calculate the extracellular potentials arising from activity in the given model neuron. It relies on the Python interface provided by the NEURON simulator.

Resource Type: software resource, source code

Defining Citation: PMID:24474916, DOI:10.3389/fninf.2013.00041

Keywords: python, extracellular potential, neuron, model, simulator

Availability: Open source, Available for download

Resource Name: LFPy

Resource ID: SCR_014805

License: GNU Public License GPL version 3

Record Creation Time: 20220129T080322+0000

Record Last Update: 20260905T133400+0000

Ratings and Alerts

No rating or validation information has been found for LFPy.

No alerts have been found for LFPy.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 35 mentions in open access literature.

Listed below are recent publications. The full list is available at PRECISE-TBI .

Guet-McCreight A, et al. (2026) Linking Age Changes in Human Cortical Microcircuits to Impaired Brain Function and EEG Biomarkers. Aging cell, 25(1), e70329.

Rosanally S, et al. (2026) Linking reduced prefrontal microcircuit inhibition in schizophrenia to EEG biomarkers in silico. PLoS computational biology, 22(6), e1014304.

Orozco Valero A, et al. (2025) A Python toolbox for neural circuit parameter inference. NPJ systems biology and applications, 11(1), 45.

Brake N, et al. (2025) Contributions of action potentials to scalp EEG: Theory and biophysical simulations. PLoS computational biology, 21(2), e1012794.

Sainburg T, et al. (2025) Domain general noise reduction for time series signals with Noisereduce. Scientific reports, 15(1), 30905.

Ye Z, et al. (2025) Ultra-high-density Neuropixels probes improve detection and identification in neuronal recordings. Neuron, 113(23), 3966.

Ness TV, et al. (2025) On the validity of electric brain signal predictions based on population firing rates. PLoS computational biology, 21(4), e1012303.

Rademacher J, et al. (2025) Computational modeling of ketamine-induced changes in gamma-band oscillations: The contribution of parvalbumin and somatostatin interneurons. PLoS computational biology, 21(6), e1013118.

Ness TV, et al. (2025) Predicting neural responses to intra- and extra-cranial electric brain stimulation by means of the reciprocity theorem. PLoS computational biology, 21(12), e1013782.

Johnsen KA, et al. (2024) Bridging model and experiment in systems neuroscience with Cleo: the Closed-Loop, Electrophysiology, and Optophysiology simulation testbed. bioRxiv : the preprint server for biology.

Brake N, et al. (2024) A neurophysiological basis for aperiodic EEG and the background spectral trend. Nature communications, 15(1), 1514.

Guet-McCreight A, et al. (2024) In-silico testing of new pharmacology for restoring inhibition and human cortical function in depression. Communications biology, 7(1), 225.

Guet-McCreight A, et al. (2024) Therapeutic dose prediction of ?5-GABA receptor modulation from simulated EEG of depression severity. PLoS computational biology, 20(12), e1012693.

Senk J, et al. (2024) Reconciliation of weak pairwise spike-train correlations and highly coherent local field potentials across space. Cerebral cortex (New York, N.Y. : 1991), 34(10).

Skaar JW, et al. (2023) Metamodelling of a two-population spiking neural network. PLoS computational biology, 19(11), e1011625.

Kumar SS, et al. (2022) Tracking axon initial segment plasticity using high-density microelectrode arrays: A computational study. Frontiers in neuroinformatics, 16, 957255.

Hagen E, et al. (2022) Brain signal predictions from multi-scale networks using a linearized framework. PLoS computational biology, 18(8), e1010353.

Herrera B, et al. (2022) Resolving the mesoscopic missing link: Biophysical modeling of EEG from cortical columns in primates. NeuroImage, 263, 119593.

Buccino AP, et al. (2022) An automated method for precise axon reconstruction from recordings of high-density micro-electrode arrays. Journal of neural engineering, 19(2).

Martínez-Cañada P, et al. (2021) Computation of the electroencephalogram (EEG) from network models of point neurons. PLoS computational biology, 17(4), e1008893.