

Resource Summary Report

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neuRosim

RRID:SCR_002154

Type: Tool

Proper Citation

neuRosim (RRID:SCR_002154)

Resource Information

URL: <http://cran.r-project.org/web/packages/neuRosim/>

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Description: Software package that allows users to generate fMRI time series or 4D data. Some high-level functions are created for fast data generation with only a few arguments and a diversity of functions to define activation and noise. For more advanced users it is possible to use the low-level functions and manipulate the arguments.

Abbreviations: neuRosim

Synonyms: neuRosim: Functions to Generate fMRI Data Including Activated Data Noise Data and Resting State Data

Resource Type: software resource

Keywords: r, fmri, time series, 4d

Availability: Free, Available for download, Freely available

Resource Name: neuRosim

Resource ID: SCR_002154

Alternate IDs: SciRes_000194

License: GNU General Public License, v2, v3

Record Creation Time: 20220129T080211+0000

Record Last Update: 20260808T185737+0000

Ratings and Alerts

No rating or validation information has been found for neuRosim.

No alerts have been found for neuRosim.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 21 mentions in open access literature.

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

Heitler WJ, et al. (2026) Computer simulations of a dynamic sodium pump-mediated hyperpolarization and short-term motor memory in the spinal locomotor network of *Xenopus* frog tadpoles. *Journal of neurophysiology*, 135(1), 165.

Francis J, et al. (2025) Inhibitory circuit motifs in *Drosophila* larvae generate motor program diversity and variability. *PLoS biology*, 23(4), e3003094.

Shin HS, et al. (2025) Resistive Switching Behavior of Sol-Gel-Processed ZnMgO/ZnO Bilayer in Optoelectronic Devices. *Nanomaterials (Basel, Switzerland)*, 15(17).

Hong H, et al. (2025) Memristor-based adaptive analog-to-digital conversion for efficient and accurate compute-in-memory. *Nature communications*, 16(1), 9749.

Sung J, et al. (2024) Unveiling the Role of Side Chain for Improving Nonvolatile Characteristics of Conjugated Polymers-Based Artificial Synapse. *Advanced science (Weinheim, Baden-Wurttemberg, Germany)*, 11(16), e2400304.

Jeong BH, et al. (2024) RGB Color-Discriminable Photonic Synapse for Neuromorphic Vision System. *Nano-micro letters*, 17(1), 78.

Song HW, et al. (2024) A pattern recognition artificial olfactory system based on human olfactory receptors and organic synaptic devices. *Science advances*, 10(21), ead12882.

Liu X, et al. (2023) An Optoelectronic Synapse Based on Two-Dimensional Violet Phosphorus Heterostructure. *Advanced science (Weinheim, Baden-Wurttemberg, Germany)*, 10(22), e2301851.

Yook CG, et al. (2023) Design Strategies of 40 nm Split-Gate NOR Flash Memory Device for Low-Power Compute-in-Memory Applications. *Micromachines*, 14(9).

Sahu DP, et al. (2023) Linear and symmetric synaptic weight update characteristics by controlling filament geometry in oxide/suboxide HfOx bilayer memristive device for neuromorphic computing. *Scientific reports*, 13(1), 9592.

Hossen I, et al. (2022) Data-driven RRAM device models using Kriging interpolation. *Scientific reports*, 12(1), 5963.

Zhao Y, et al. (2022) Group linear non-Gaussian component analysis with applications to neuroimaging. *Computational statistics & data analysis*, 171.

Kazemi A, et al. (2022) Achieving software-equivalent accuracy for hyperdimensional computing with ferroelectric-based in-memory computing. *Scientific reports*, 12(1), 19201.

Choi Y, et al. (2020) Vertical organic synapse expandable to 3D crossbar array. *Nature communications*, 11(1), 4595.

Degryse J, et al. (2020) A likelihood ratio approach for functional localization in fMRI. *Journal of neuroscience methods*, 330, 108417.

Olszowy W, et al. (2019) Accurate autocorrelation modeling substantially improves fMRI reliability. *Nature communications*, 10(1), 1220.

Saggar M, et al. (2018) Towards a new approach to reveal dynamical organization of the brain using topological data analysis. *Nature communications*, 9(1), 1399.

Nicolini C, et al. (2017) Community detection in weighted brain connectivity networks beyond the resolution limit. *NeuroImage*, 146, 28.

Degryse J, et al. (2017) Introducing Alternative-Based Thresholding for Defining Functional Regions of Interest in fMRI. *Frontiers in neuroscience*, 11, 222.

Bordier C, et al. (2017) Graph Analysis and Modularity of Brain Functional Connectivity Networks: Searching for the Optimal Threshold. *Frontiers in neuroscience*, 11, 441.