

Resource Summary Report

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NeuroMatic

RRID:SCR_004186

Type: Tool

Proper Citation

NeuroMatic (RRID:SCR_004186)

Resource Information

URL: <http://www.neuromatic.thinkrandom.com/>

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Description: NeuroMatic is a collection of Igor Pro functions for analyzing electrophysiological data. By allowing users to organize their data into Sets and Groups, NeuroMatic makes it relatively easy to compute transformations and statistical analyses on their data, including scaling, alignment averaging, baseline subtraction, spike detection, stationarity analysis, rise-time computations, etc. Being open source and modular designed, NeuroMatic also allows users to develop their own analysis functions that can be easily incorporated into NeuroMatic's framework. Note, if you have reached this page in search of a freeware tool for neuronal reconstructions, you are more likely to be interested in Neuromantic, a software package that sounds like NeuroMatic, but is not quite the same. Features of NeuroMatic Include * Sorting, Scaling, Averaging, Interpolation * Max / Min / Mean / Level / Rise Time / FWHM / Slope Measurements * Stability / Stationarity Analysis * Event Detection * Waveform Template Matching * Spike Raster Plots * Interspike-Interval and Peri-Stimulus Time (PST) Histograms * Compact Easy-to-Use Interface * Modular design as a basis for your own procedures * Extra space for your own buttons and controls * Import functions for Axograph and Pclamp data * Automatic macro generation for batch processing Supporting Agencies: MRC, Wellcome Trust Spike, Event, Fit, NClamp, Acquisition, spike train, EPSP, IPSP, IPSC, EPSC

Synonyms: NeuroMatic

Resource Type: data processing software, data analysis software, software application, software resource

Defining Citation: [PMID:29670519](#)

Keywords: epsc, epsp, event, fit, acquisition, data management, ipsc, ipsp, nclamp, software, spike, spike train, bio.tools

Resource Name: NeuroMatic

Resource ID: SCR_004186

Alternate IDs: nif-0000-00073, biotools:neuromatic

Alternate URLs: <https://bio.tools/neuromatic>

Record Creation Time: 20220129T080223+0000

Record Last Update: 20260801T190232+0000

Ratings and Alerts

No rating or validation information has been found for NeuroMatic.

No alerts have been found for NeuroMatic.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 301 mentions in open access literature.

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

Miya K, et al. (2026) Altered Excitability and Glutamatergic Synaptic Transmission in the Medium Spiny Neurons of the Nucleus Accumbens in Mice Deficient in the Heparan Sulfate Endosulfatase Sulf1. *eNeuro*, 13(1).

Stamouli CA, et al. (2026) A distinct lineage pathway drives parvalbumin chandelier cell fate in human interneuron reprogramming. *Science advances*, 12(1), eadv0588.

Owen R, et al. (2025) Perfluorooctanesulfonic acid (PFOS) antagonizes gamma-aminobutyric acid (GABA) receptors in larval zebrafish and mammalian models. *Toxicological sciences : an official journal of the Society of Toxicology*, 207(2), 449.

Rorsman HO, et al. (2025) Sleep pressure accumulates in a voltage-gated lipid peroxidation memory. *Nature*, 641(8061), 232.

Reig-Viader R, et al. (2025) Synaptic proteome diversity is shaped by the levels of glutamate receptors and their regulatory proteins. *Nature communications*, 16(1), 10487.

Yang YM, et al. (2025) Intersectin-1 enhances calcium-dependent replenishment of the readily releasable pool of synaptic vesicles during development. *The Journal of physiology*, 603(20), 6185.

Bojovic D, et al. (2025) Astrocyte gap junctions and Kir channels contribute to K⁺ buffering and regulate neuronal excitability. *bioRxiv : the preprint server for biology*.

Di Berardino C, et al. (2025) Serotonin regulates in a cell-type specific manner light-evoked response and synaptic activity in mouse retinal ganglion cells. *Biological research*, 58(1), 11.

Kreeger LJ, et al. (2025) An anatomical and physiological basis for flexible coincidence detection in the auditory system. *eLife*, 13.

Andrianova L, et al. (2025) Hippocampal pyramidal cells of the CA1 region are not a major target of the thalamic nucleus reuniens. *PLoS biology*, 23(10), e3003419.

Irie K, et al. (2025) Conformational dynamics underlying slow inactivation in voltage-gated sodium channels. *bioRxiv : the preprint server for biology*.

Kolling LJ, et al. (2025) The superficial tufted and mitral cell output neurons of the mouse olfactory bulb have dual roles in insulin sensing. *Journal of cell science*, 138(19).

Kramer PF, et al. (2025) Excitatory nicotinic signaling drives action potential bursting in dopaminergic axons. *bioRxiv : the preprint server for biology*.

McIlvried LA, et al. (2025) Intrinsic adaptive plasticity in mouse and human sensory neurons. *The Journal of general physiology*, 157(1).

Zetterdahl OG, et al. (2025) Generation of iPSC Lines with Tagged α -Synuclein for Visualization of Endogenous Protein in Human Cellular Models of Neurodegenerative Disorders. *eNeuro*, 12(6).

Ritzau-Jost A, et al. (2025) Unreliable homeostatic action potential broadening in cultured dissociated neurons. *bioRxiv : the preprint server for biology*.

Sarnataro R, et al. (2025) Mitochondrial origins of the pressure to sleep. *Nature*, 645(8081), 722.

Aoki R, et al. (2025) AAV vectors for specific and efficient gene expression in microglia. *Cell reports methods*, 5(8), 101116.

Arancibia F, et al. (2025) Olfactory dysfunction and altered cortical excitability in the mouse model of Fragile X Syndrome. *Biological research*, 58(1), 21.

Groshkova M, et al. (2025) Investigation of neuromodulation of the endbulb of Held synapse in the cochlear nucleus by serotonin and norepinephrine. *Frontiers in cellular neuroscience*, 19, 1575158.