

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

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: 20260808T185812+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 315 mentions in open access literature.

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

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).

Al-Yaari M, et al. (2026) Presynaptic CaV2.1 calcium dependent facilitation is essential for faithful auditory information transfer. *bioRxiv : the preprint server for biology*.

Moura-Assis A, et al. (2026) Identification of a thermogenic target in the dorsal raphe nucleus for weight management in mice. *Nature communications*, 17(1), 1295.

Mountadem S, et al. (2026) Astrocytic mGluR5 Regulation of Synaptic Transmission is Activity-Dependent in Adult Rats. *Glia*, 74(8), e70162.

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

Del Turco D, et al. (2026) Overexpression of Synaptopodin increases the number of spine apparatuses and active synapses of dentate granule cells. *Scientific reports*, 16(1).

Maeda YK, et al. (2026) Structure-function analysis of the lithium-ion selectivity of the voltage-gated sodium channel. *The Journal of general physiology*, 158(3).

Tabuena DR, et al. (2026) Neuronal APOE4-induced early hippocampal network hyperexcitability in Alzheimer's disease pathogenesis. *Nature aging*, 6(4), 886.

Huang Z, et al. (2026) Single-dose psilocybin promotes cell-type-specific changes of neurons in the orbitofrontal cortex. *Neurotherapeutics : the journal of the American Society for Experimental NeuroTherapeutics*, 23(1), e00841.

Mukhopadhyay M, et al. (2026) Persistence of vestibular function in the absence of glutamatergic transmission from hair cells. *Scientific reports*, 16(1).

Wani MA, et al. (2026) Reversible synaptic deficits in early-stage batten disease. *Journal of translational medicine*, 24(1).

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

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.

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.

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.

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*.

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*.