

Resource Summary Report

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Chronux

RRID:SCR_005547

Type: Tool

Proper Citation

Chronux (RRID:SCR_005547)

Resource Information

URL: <http://chronux.org>

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Description: Open-source software package for the analysis of neural data. Chronux routines may be employed in the analysis of both point process and continuous data, ranging from preprocessing, exploratory and confirmatory analysis. The current release is implemented as a MATLAB library. Chronux offers several routines for computing spectra and coherences for both point and continuous processes. In addition, it also offers several general purpose routines that were found useful such as a routine for extracting specified segments from data, or binning spike time data with bins of a specified size. Since the data can be continuous valued, point process times, or point processes that are binned, methods that apply to all these data types are given in routines whose names end with ""c"" for continuous, ""pb"" for binned point processes, and ""pt"" for point process times. Thus, mtspectrumc computes the spectrum of continuous data, mtspectrumpb computes a spectrum for binned point processes, and mtspectrumpt compute spectra for data consisting of point process times. Hybrid routines are also available and similarly named - for instance coherencycpb computes the coherency between continuous and binned point process data.

Abbreviations: Chronux

Synonyms: Chronux Analysis Software

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

Keywords: fmri, brain mapping, brain, matlab

Funding: NIMH

Availability: Open-source. Please cite.

Resource Name: Chronux

Resource ID: SCR_005547

Alternate IDs: nif-0000-00082

Record Creation Time: 20220129T080231+0000

Record Last Update: 20260804T043242+0000

Ratings and Alerts

No rating or validation information has been found for Chronux.

No alerts have been found for Chronux.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 535 mentions in open access literature.

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

Mourão FAG, et al. (2026) Hippocampal-Prelimbic Coupling During Context-Dependent Extinction Retrieval in Rats. *Hippocampus*, 36(1), e70058.

Boyce AKJ, et al. (2025) Contralesional hippocampal spreading depolarization promotes functional recovery after stroke. *Nature communications*, 16(1), 3428.

García F, et al. (2025) Prefrontal cortex synchronization with the hippocampus and parietal cortex is strategy-dependent during spatial learning. *Communications biology*, 8(1), 79.

Li J, et al. (2025) Activation of Glutamatergic Neurons in the Supramammillary Nucleus Promotes the Recovery of Consciousness under Sevoflurane Anesthesia. *Advanced science* (Weinheim, Baden-Wurttemberg, Germany), 12(21), e2406959.

Latchoumane CV, et al. (2025) Mediodorsal thalamic nucleus mediates resistance to ethanol through Cav3.1 T-type Ca²⁺ regulation of neural activity. *eLife*, 13.

Adaikkan C, et al. (2025) A multimodal approach of microglial CSF1R inhibition and GENUS provides therapeutic effects in Alzheimer's disease mice. *bioRxiv : the preprint server for biology*.

Kelley C, et al. (2025) Alpha modulation of spiking activity across multiple brain regions in mice performing a tactile selective detection task. *bioRxiv : the preprint server for biology*.

Heldman R, et al. (2025) Time or distance encoding by hippocampal neurons via heterogeneous ramping rates. *Nature communications*, 16(1), 11083.

Damiani L, et al. (2025) Subthalamic Activity Is Associated With Proactive Inhibition in Parkinson's Disease Patients. *The European journal of neuroscience*, 61(5), e70055.

Chen JE, et al. (2025) Simultaneous EEG-PET-MRI identifies temporally coupled, spatially structured hemodynamic and metabolic dynamics across wakefulness and NREM sleep. *bioRxiv : the preprint server for biology*.

Zhang T, et al. (2025) Laparotomy and burst suppression-inducing sevoflurane induce subtle long-term changes in anxiety and social behavior in late postnatal mice. *Korean journal of anesthesiology*, 78(4), 382.

Kordecka K, et al. (2025) Comparison of Physiological Brain Responses Evoked by Visual and Electrical Stimulation. *Investigative ophthalmology & visual science*, 66(5), 1.

Shi Y, et al. (2025) Theta oscillation synchronize VTA and mPFC during ethanol-induced conditioned place preference and stress-evoked anxiety. *Translational psychiatry*, 15(1), 206.

Aguilera M, et al. (2025) 40 Hz light stimulation restores early brain dynamics alterations and associative memory in Alzheimer's disease model mice. *Imaging neuroscience (Cambridge, Mass.)*, 3.

Shi K, et al. (2025) Distinct Mechanisms of Multiple Alpha-Band Activities in Frontal Regions Following an 8-Week Medium- (Yoga) and High-Intensity (Pamela) Exercise Intervention. *CNS neuroscience & therapeutics*, 31(5), e70405.

Collomb-Clerc A, et al. (2025) Subthalamic Electrophysiological Mapping of Gait Initiation Dynamics and Freezing in Parkinson's Disease. *Annals of neurology*, 98(5), 977.

Mourão FAG, et al. (2025) Hippocampal-prelimbic coupling during context-dependent extinction retrieval in rats. *bioRxiv : the preprint server for biology*.

Lynch N, et al. (2025) Calcitonin Gene-Related Peptide (CGRP)-Expressing Neurons in the External Lateral Parabrachial Area Regulate Pain-Induced Sleep Disturbances. *Advanced science (Weinheim, Baden-Wurttemberg, Germany)*, e00325.

Zhang J, et al. (2025) Distinct attentional characteristics of neurons with visual feature coding in the primate brain. *Science advances*, 11(12), eadq0332.

Badawy M, et al. (2025) Major individual and regional variations in unit entrainment by oscillations of different frequencies. *Scientific reports*, 15(1), 1772.