

Resource Summary Report

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EEGLAB

RRID:SCR_007292

Type: Tool

Proper Citation

EEGLAB (RRID:SCR_007292)

Resource Information

URL: <http://www.nitrc.org/projects/eeglab/>

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Description: Interactive Matlab toolbox for processing continuous and event-related EEG, MEG and other electrophysiological data incorporating independent component analysis (ICA), time/frequency analysis, artifact rejection, event-related statistics, and several useful modes of visualization of the averaged and single-trial data. First developed on Matlab 5.3 under Linux, EEGLAB runs on Matlab v5 and higher under Linux, Unix, Windows, and Mac OS X (Matlab 7+ recommended). EEGLAB provides an interactive graphic user interface (GUI) allowing users to flexibly and interactively process their high-density EEG and other dynamic brain data using independent component analysis (ICA) and/or time/frequency analysis (TFA), as well as standard averaging methods. EEGLAB also incorporates extensive tutorial and help windows, plus a command history function that eases users' transition from GUI-based data exploration to building and running batch or custom data analysis scripts. EEGLAB offers a wealth of methods for visualizing and modeling event-related brain dynamics, both at the level of individual EEGLAB "datasets" and/or across a collection of datasets brought together in an EEGLAB "studyset." For experienced Matlab users, EEGLAB offers a structured programming environment for storing, accessing, measuring, manipulating and visualizing event-related EEG data. For creative research programmers and methods developers, EEGLAB offers an extensible, open-source platform through which they can share new methods with the world research community by publishing EEGLAB "plug-in" functions that appear automatically in the EEGLAB menu of users who download them. For example, novel EEGLAB plug-ins might be built and released to "pick peaks" in ERP or time/frequency results, or to perform specialized import/export, data visualization, or inverse source modeling of EEG, MEG, and/or ECOG data. EEGLAB Features * Graphic user interface * Multiformat data importing * High-density data scrolling * Defined EEG data structure * Open source plug-in facility * Interactive plotting functions * Semi-automated artifact removal * ICA & time/frequency transforms * Many advanced plug-in toolboxes * Event & channel location handling * Forward/inverse head/source modeling

Abbreviations: EEGLAB

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

Defining Citation: [PMID:15102499](#)

Keywords: visualization, eeg modeling, independent component analysis, meg modeling, eeg, erp, spectral decomposition, single-trial, matlab, meg, electrophysiology, format conversion, source separation analysis, fourier time-domain analysis, spectral analysis, temporal wavelet analysis, anova, event related potential, three dimensional display, two dimensional display

Funding: NINDS

Availability: Free, Available for download, Freely available

Resource Name: EEGLAB

Resource ID: SCR_007292

Alternate IDs: nif-0000-00076

Alternate URLs: https://eeglab.org/others/EEGLAB_References.html

Old URLs: http://www.nitrc.org/projects/incf_eeglab/,
<http://sccn.ucsd.edu/eeglab/index.html>

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Ratings and Alerts

No rating or validation information has been found for EEGLAB.

No alerts have been found for EEGLAB.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 7215 mentions in open access literature.

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

Pedersen ML, et al. (2026) Neural decision dynamics underlying reinforcement learning and working memory. *iScience*, 29(5), 115471.

Ro??ast NM, et al. (2026) Random auditory stimulation during sleep disturbs traveling slow waves and declarative memory. *iScience*, 29(7), 116601.

Salminen J, et al. (2026) Interstride Variation in EEG Power Spectra of Younger and Older Adults Walking at a Range of Gait Speeds. *IEEE transactions on neural systems and rehabilitation engineering : a publication of the IEEE Engineering in Medicine and Biology Society*, 34, 952.

Estorellas C, et al. (2026) Synaptic plasticity in the perforant pathway drives inhibitory reorganization enhancing dentate gyrus functionality. *iScience*, 29(3), 114878.

Vaezi H, et al. (2026) High-frequency EEG synchronization modes as a stable biometric signature in humans. *iScience*, 29(6), 116166.

Burke R, et al. (2026) Modulation of Non-Rhythmic Temporal Prediction by Subthalamic Nucleus Deep Brain Stimulation (STN-DBS) in Parkinson's Disease. *Movement disorders : official journal of the Movement Disorder Society*.

Wan W, et al. (2026) Bursts of regional cortical inhibition during smartphone use. *iScience*, 29(4), 115375.

Prochnow A, et al. (2026) How the influence of cingulate-lingual interactions on event segmentation changes from early to late adolescence. *Scientific reports*, 16(1).

Zhang F, et al. (2026) Integrating multidimensional nociceptive-related cortical features for unsupervised assessment of anesthesia states in rats. *iScience*, 29(6), 116152.

Tang X, et al. (2026) Echoes of the mind's eye: Reciprocal crossmodal interaction between auditory and visual processing. *iScience*, 29(3), 114990.

Biswas A, et al. (2026) Simultaneous enhancement of stimulus-induced and stimulus-free gamma in open-eye meditators. *Imaging neuroscience (Cambridge, Mass.)*, 4.

Bertoni T, et al. (2026) Multisensory integration in peripersonal space indexes consciousness states in sleep and disorders of consciousness. *Cell reports. Medicine*, 7(4), 102705.

M??ckschel M, et al. (2026) Auricular transcutaneous vagus nerve stimulation alters directed cortical communication during intentional actions. *iScience*, 29(2), 114571.

Yang C, et al. (2026) Impaired sleep resilience underlies transient neural instability in insomnia disorder. *iScience*, 29(6), 116151.

Kulakova E, et al. (2026) Post-loss speeding and neurophysiological markers of action preparation and outcome processing in probabilistic reversal learning. *Quarterly journal of experimental psychology (2006)*, 79(1), 87.

Lenzoni S, et al. (2026) Investigating the relationship between gut microbiota and electrocortical signatures of feedback processing: an ERP study. *Psychopharmacology*, 243(4), 767.

Widmann A, et al. (2026) Measuring the Genuine Mismatch Negativity in the Auditory Multi-Feature Paradigm. *The European journal of neuroscience*, 63(1), e70362.

Yan YH, et al. (2026) Protocol to investigate neurophysiological link between resting-state brain activity and clinical symptoms in methamphetamine use disorder. *STAR protocols*, 7(1), 104276.

van Bueren NER, et al. (2026) Comparing aperiodic activity in consumer-grade and research-grade EEG: Reliability and association with mathematical ability. *Behavior research methods*, 58(1), 32.

Zhang W, et al. (2026) Characteristics of resting-state EEG after deep brain stimulation in nucleus accumbens and anterior limb of internal capsule: a pilot study. *BMC psychiatry*, 26(1), 120.