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 T1D .

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.

Estarellas 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.

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

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

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

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.

Fuller A, et al. (2026) The Impact of Error-Related Brain Activity and Parental Attachment on Youth Posttraumatic Stress Symptoms. Psychophysiology, 63(4), e70295.

Pierrieau E, et al. (2026) Cortical beta coherence provides a stronger non-invasive predictor of movement vigor than local beta power. Journal of neuroengineering and rehabilitation, 23(1).

Pescaglia F, et al. (2026) Exploring Dynamic Alpha Band Connectivity in Parkinson's Disease: A Novel Approach to Postural Control Assessment Using the BioVRSea Paradigm. Brain topography, 39(2), 20.

Wu YC, et al. (2026) Alleviating Job-Related Burnout in Medical Professionals through Guided Imagery Hypnotherapy. Journal of evidence-based integrative medicine, 31, 2515690X261418396.