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

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 6721 mentions in open access literature.

Listed below are recent publications. The full list is available at dkNET .

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.

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.

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

Wehmeyer L, et al. (2026) Thalamo-frontal functional connectivity patterns in Tourette Syndrome: Insights from combined intracranial DBS and EEG recordings. Molecular psychiatry, 31(1), 231.

Wang Y, et al. (2026) Language exposure predicts infants' neural processing of others' actions based on language group. Developmental cognitive neuroscience, 77, 101645.

Camenzind M, et al. (2026) Exploring prefrontal alpha modulation as a mechanistic treatment target in lupus-associated depression: A transcranial alternating current stimulation study. Lupus, 35(1), 86.

Liu P, et al. (2026) Bidirectional associations between self-referential processing and depressive symptoms in early adolescents: A two-wave EEG study. Developmental cognitive neuroscience, 77, 101658.

Kuznetsova E, et al. (2026) Mechanisms of Learning in Adults With ADHD During an Ecologically-Valid Visual Discrimination Task. Journal of attention disorders, 30(1), 38.

Mahnan A, et al. (2026) Laryngeal Vibration to Treat Abductor-Type Laryngeal Dystonia: Effectiveness and Cortical Response. The Laryngoscope, 136(1), 368.

Kosachenko AI, et al. (2026) Temporal Structure of Item Presentation Modulates Brain Oscillations in Verbal Working Memory. The European journal of neuroscience, 63(1), e70371.

van der Wulp I, et al. (2026) Words and Meters: Neural Evidence for a Connection Between Individual Differences in Statistical Learning and Rhythmic Ability in Infancy. Developmental science, 29(2), e70116.

Charalampaki A, et al. (2026) Comparing Metacognitive Representations of Bodily and External Agency. eNeuro, 13(1).

Petrin A, et al. (2026) An Electroencephalographic Investigation of the Impact of Eye Movements in a Memory Probe Task. Psychophysiology, 63(1), e70220.

H??den GP, et al. (2025) Longitudinal study of functional brain networks for processing infant-directed and adult-directed speech during the first year. iScience, 28(10), 113583.

Michel L, et al. (2025) Unraveling variability in young children's brain responses to varied sensory stimulations. iScience, 28(11), 113773.

Bracco M, et al. (2025) Protocol to assess changes in brain network resistance to perturbation during offline processing using TMS-EEG. STAR protocols, 6(1), 103622.

Aggarwal S, et al. (2025) Changes in Higuchi Fractal Dimension Across Age in Healthy Human EEG Are Anticorrelated With Changes in Oscillatory Power and 1/f Slope. The European journal of neuroscience, 62(2), e70193.

Yue L, et al. (2025) Neuronal mechanisms of nociceptive-evoked gamma-band oscillations in rodents. Neuron, 113(5), 769.

Fang W, et al. (2025) Oscillatory control over representational geometry of sequence working memory in macaque frontal cortex. Current biology : CB, 35(7), 1495.

Liu S, et al. (2025) Context influence on speech perception: evidence for acoustic-level mechanism across the voice onset time continuum. NeuroImage, 310, 121140.