Resource Summary Report

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EYE-EEG (combined eye-tracking & EEG)

RRID:SCR_012903
Type: Tool

Proper Citation

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Resource Information

URL: http://www2.hu-berlin.de/eyetracking-eeg

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Description: A plugin for the open-source MATLAB toolbox EEGLAB developed with the goal to facilitate integrated analyses of electrophysiological and oculomotor data. The plugin parses, imports, and synchronizes simultaneously recorded eye tracking data and adds it as extra channels to the EEG. Saccades and fixations can be imported from the eye tracking raw data or detected with an adaptive velocity-based algorithm. Eye movements are then added as new time-locking events to EEGLAB's event structure, allowing easy saccade- and fixation-related EEG analysis (e.g., fixation-related potentials, FRPs). Alternatively, EEG data can be aligned to stimulus onsets and analyzed according to oculomotor behavior (e.g. pupil size, microsaccades) in a given trial. Saccade-related ICA components can be objectively identified based on their covariance with the electrically independent eye tracker. All functions can be accessed via EEGLAB's GUI or called from the command line.

Abbreviations: EYE-EEG

Synonyms: EYE-EEG: Eye tracking & EEG

Resource Type: software resource

Defining Citation: PMID:21744985

Keywords: eeg, meg, electrocorticography, matlab, os independent, eye, electrophysiology, oculomotor, eye tracking device

Funding: DFG

Availability: GNU General Public License

Resource Name: EYE-EEG (combined eye-tracking & EEG)

Resource ID: SCR_012903

Alternate IDs: nlx_155755

Alternate URLs: http://www.nitrc.org/projects/eye-eeg

Record Creation Time: 20220129T080313+0000

Record Last Update: 20250420T014624+0000

Ratings and Alerts

No rating or validation information has been found for EYE-EEG (combined eye-tracking & EEG).

No alerts have been found for EYE-EEG (combined eye-tracking & EEG).

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 13 mentions in open access literature.

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

Yu S, et al. (2022) A role of the norepinephrine system or effort in the interplay of different facets of inhibitory control. Neuropsychologia, 166, 108143.

Yu S, et al. (2022) Superior frontal regions reflect the dynamics of task engagement and theta band-related control processes in time-on task effects. Scientific reports, 12(1), 846.

Beuchat I, et al. (2022) Continuous Versus Routine Standardized Electroencephalogram for Outcome Prediction in Critically Ill Adults: Analysis From a Randomized Trial. Critical care medicine, 50(2), 329.

Enders LR, et al. (2021) Gaze Behavior During Navigation and Visual Search of an Open-World Virtual Environment. Frontiers in psychology, 12, 681042.

Sommer VR, et al. (2021) Memory specificity is linked to repetition effects in event-related potentials across the lifespan. Developmental cognitive neuroscience, 48, 100926.

Cornelissen T, et al. (2019) Improving free-viewing fixation-related EEG potentials with continuous-time regression. Journal of neuroscience methods, 313, 77.

Fudali-Czy? A, et al. (2018) The Effect of Art Expertise on Eye Fixation-Related Potentials During Aesthetic Judgment Task in Focal and Ambient Modes. Frontiers in psychology, 9, 1972.

Mückschel M, et al. (2017) The norepinephrine system and its relevance for multi-component behavior. NeuroImage, 146, 1062.

Meindertsma T, et al. (2017) Multiple Transient Signals in Human Visual Cortex Associated with an Elementary Decision. The Journal of neuroscience : the official journal of the Society for Neuroscience, 37(23), 5744.

Mückschel M, et al. (2017) The norepinephrine system shows information-content specific properties during cognitive control - Evidence from EEG and pupillary responses. NeuroImage, 149, 44.

Ries AJ, et al. (2016) The Impact of Task Demands on Fixation-Related Brain Potentials during Guided Search. PloS one, 11(6), e0157260.

Emmerling TC, et al. (2016) Decoding the direction of imagined visual motion using 7T ultra-high field fMRI. NeuroImage, 125, 61.

Meyberg S, et al. (2015) Microsaccade-related brain potentials signal the focus of visuospatial attention. NeuroImage, 104, 79.