Resource Summary Report

Generated by RRID on Apr 8, 2025

exact Low Resolution Electromagnetic Tomography

RRID:SCR_013830
Type: Tool

Proper Citation

exact Low Resolution Electromagnetic Tomography (RRID:SCR_013830)

Resource Information

URL: http://www.uzh.ch/keyinst/loreta

Proper Citation: exact Low Resolution Electromagnetic Tomography (RRID:SCR_013830)

Description: Software application which computes cortical three-dimensional distribution of current density of the brain based on the scalp-recorded electric potential distribution. The exact low resolution brain electromagnetic tomography method has the property of exact localization to test point sources, yielding images of current density with exact localization, albeit with low spatial resolution. eLORETA has no localization bias even in the presence of structured noise. Deep structures, such as the anterior cingulate cortex and mesial temporal lobes, can be correctly localized with these methods.

Abbreviations: eLORETA

Synonyms: Exact Low Resolution Brain Electromagnetic Tomography

Resource Type: software resource, software application

Keywords: LORETA, EEG, MEG, brain, image, electromagnetic tomography

Funding:

Availability: Free, Not ready for public distribution, Must have administrator rights

Resource Name: exact Low Resolution Electromagnetic Tomography

Resource ID: SCR_013830

Old URLs: http://www.uzh.ch/keyinst/loretaOldy.htm

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Record Creation Time: 20220129T080318+0000

Record Last Update: 20250404T061035+0000

Ratings and Alerts

No rating or validation information has been found for exact Low Resolution Electromagnetic Tomography.

No alerts have been found for exact Low Resolution Electromagnetic Tomography.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 245 mentions in open access literature.

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

Bitsika V, et al. (2025) Low-Level Social Demand Is Associated with Anxiety-Related Gamma Wave Responses in Autistic Male Youth. Brain sciences, 15(1).

Zotev V, et al. (2025) Evaluation of Theta EEG Neurofeedback Procedure for Cognitive Training Using Simultaneous fMRI in Counterbalanced Active-Sham Study Design. Human brain mapping, 46(1), e70127.

Ueno K, et al. (2025) Current source density and functional connectivity extracted from resting-state electroencephalography as biomarkers for chronic low back pain. Pain reports, 10(1), e1233.

Gimenez-Aparisi G, et al. (2025) Abnormal dynamic features of cortical microstates for detecting early-stage Parkinson's disease by resting-state electroencephalography: Systematic analysis of the influence of eye condition. Heliyon, 11(1), e41500.

Caminiti SP, et al. (2024) Exploring the neural and behavioral correlates of cognitive

telerehabilitation in mild cognitive impairment with three distinct approaches. Frontiers in aging neuroscience, 16, 1425784.

Alexander NA, et al. (2024) Oscillatory Neural Correlates of Police Firearms Decision-Making in Virtual Reality. eNeuro, 11(7).

Vecchio F, et al. (2024) Small World derived index to distinguish Alzheimer's type dementia and healthy subjects. Age and ageing, 53(6).

Yokoyama H, et al. (2024) M/EEG source localization for both subcortical and cortical sources using a convolutional neural network with a realistic head conductivity model. APL bioengineering, 8(4), 046104.

Molefi E, et al. (2024) Transcutaneous Auricular Vagus Nerve Stimulation for Visually Induced Motion Sickness: An eLORETA Study. Brain topography, 38(1), 11.

Depuydt E, et al. (2024) Investigating the effect of template head models on Event-Related Potential source localization: a simulation and real-data study. Frontiers in neuroscience, 18, 1443752.

Orui J, et al. (2024) Psychophysiological and interpersonal effects of parallel group crafting: a multimodal study using EEG and ECG. Scientific reports, 14(1), 17883.

Ghosh P, et al. (2024) Unsupervised Characterization of Prediction Error Markers in Unisensory and Multisensory Streams Reveal the Spatiotemporal Hierarchy of Cortical Information Processing. eNeuro, 11(5).

Flasbeck V, et al. (2024) Microbiome composition and central serotonergic activity in patients with depression and type 1 diabetes. European archives of psychiatry and clinical neuroscience, 274(5), 1177.

Auer T, et al. (2024) Functionally annotated electrophysiological neuromarkers of healthy ageing and memory function. Human brain mapping, 45(6), e26687.

Katayama O, et al. (2024) Detection of neurophysiological markers of cognitive reserve: an EEG study. Frontiers in aging neuroscience, 16, 1401818.

Elyamany O, et al. (2024) Top-down modulation of dichotic listening affects interhemispheric connectivity: an electroencephalography study. Frontiers in neuroscience, 18, 1424746.

Fourcade A, et al. (2024) Linking brain-heart interactions to emotional arousal in immersive virtual reality. Psychophysiology, 61(12), e14696.

Mas-Cuesta L, et al. (2024) Brain signatures of catastrophic events: Emotion, salience, and cognitive control. Psychophysiology, 61(12), e14674.

Tan L, et al. (2024) Exploring brain network oscillations during seizures in drug-naïve patients with juvenile absence epilepsy. Frontiers in neurology, 15, 1340959.

Kaboodvand N, et al. (2024) Preparatory activity of anterior insula predicts conflict errors:

integrating convolutional neural networks and neural mass models. Scientific reports, 14(1), 16682.