Resource Summary Report

Generated by NIF on May 19, 2025

Cambridge Brain Activation

RRID:SCR_007109
Type: Tool

Proper Citation

Cambridge Brain Activation (RRID:SCR_007109)

Resource Information

URL: http://www.bmu.psychiatry.cam.ac.uk/software/

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Description: Suite of programs developed for fMRI analysis in a Virtual Pipeline Laboratory facilitates combining program modules from different software packages into processing pipelines to create analysis solutions which are not possible with a single software package alone. Current pipelines include fMRI analysis, statistical testing based on randomization methods and fractal spectral analysis. Pipelines are continually being added. The software is mostly written in C. This fMRI analysis package supports batch processing and comprises the following general functions at the first level of individual image analysis: movement correction (interpolation and regression), time series modeling, data resampling in the wavelet domain, hypothesis testing at voxel and cluster levels. Additionally, there is code for second level analysis - group and factorial or ANOVA mapping - after co-registration of voxel statistic maps from individual images in a standard space. The main point of difference from other fMRI analysis packages is the emphasis throughout on the use of data resampling (permutation or randomization) as a basis for inference on individual, group and factorial test statistics at voxel and cluster levels of resolution.

Abbreviations: CamBA

Resource Type: software application, software toolkit, workflow software, data processing software, image analysis software, software resource

Keywords: analysis, brain, anova, resampling, statistical, wavelet, fmri, pipeline, affine warp, algorithm or reusable library, application, c, image-to-template, java, linux, macos, magnetic resonance, nifti-1, posix/unix-like, registration, regression, spatial transformation, spectral analysis, statistical operation, temporal transformation, time domain analysis, unix shell, warping, wavelet transformation, web environment

Funding: GlaxoSmithKline ;
Human Brain Project ;
NIMH ;
NIBIB

Availability: GNU General Public License

Resource Name: Cambridge Brain Activation

Resource ID: SCR_007109

Alternate IDs: nif-0000-00267

Old URLs: http://www-bmu.psychiatry.cam.ac.uk/software/

Record Creation Time: 20220129T080239+0000

Record Last Update: 20250517T055807+0000

Ratings and Alerts

No rating or validation information has been found for Cambridge Brain Activation.

No alerts have been found for Cambridge Brain Activation.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 11 mentions in open access literature.

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

Soares JM, et al. (2016) A Hitchhiker's Guide to Functional Magnetic Resonance Imaging. Frontiers in neuroscience, 10, 515.

Winder-Rhodes SE, et al. (2015) Association between MAPT haplotype and memory function in patients with Parkinson's disease and healthy aging individuals. Neurobiology of

aging, 36(3), 1519.

Ersche KD, et al. (2015) In the face of threat: neural and endocrine correlates of impaired facial emotion recognition in cocaine dependence. Translational psychiatry, 5(5), e570.

Quarantelli M, et al. (2014) Patients with poor response to antipsychotics have a more severe pattern of frontal atrophy: a voxel-based morphometry study of treatment resistance in schizophrenia. BioMed research international, 2014, 325052.

Lewis MJ, et al. (2013) Influence of age and aerobic fitness on the multifractal characteristics of electrocardiographic RR time-series. Frontiers in physiology, 4, 100.

del Campo N, et al. (2013) A positron emission tomography study of nigro-striatal dopaminergic mechanisms underlying attention: implications for ADHD and its treatment. Brain : a journal of neurology, 136(Pt 11), 3252.

Ersche KD, et al. (2013) Distinctive personality traits and neural correlates associated with stimulant drug use versus familial risk of stimulant dependence. Biological psychiatry, 74(2), 137.

Ersche KD, et al. (2011) Abnormal structure of frontostriatal brain systems is associated with aspects of impulsivity and compulsivity in cocaine dependence. Brain : a journal of neurology, 134(Pt 7), 2013.

Fornito A, et al. (2010) Network scaling effects in graph analytic studies of human resting-state FMRI data. Frontiers in systems neuroscience, 4, 22.

Barnes A, et al. (2009) Endogenous human brain dynamics recover slowly following cognitive effort. PloS one, 4(8), e6626.

Ooi C, et al. (2009) CamBAfx: Workflow Design, Implementation and Application for Neuroimaging. Frontiers in neuroinformatics, 3, 27.