BrainSuite
RRID:SCR_006623
Type: Tool

Proper Citation

BrainSuite (RRID:SCR_006623)

Resource Information

URL: http://users.loni.ucla.edu/~shattuck/brainsuite/

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Description: Suite of image analysis tools designed to process magnetic resonance images (MRI) of the human head. BrainSuite provides an automatic sequence to extract genus-zero cortical surface mesh models from the MRI. It also provides a set of viewing tools for exploring image and surface data. The latest release includes graphical user interface and command line versions of the tools. BrainSuite was specifically designed to guide its users through the process of cortical surface extraction. NITRC has written the software to require minimal user interaction and with the goal of completing the entire process of extracting a topologically spherical cortical surface from a raw MR volume within several minutes on a modern workstation. The individual components of BrainSuite may also be used for soft tissue, skull and scalp segmentation and for surface analysis and visualization. BrainSuite was written in Microsoft Visual C using the Microsoft Foundation Classes for its graphical user interface and the OpenGL library for rendering. BrainSuite runs under the Windows 2000 and Windows XP Professional operating systems. BrainSuite features include: * Sophisticated visualization tools, such as MRI visualization in 3 orthogonal views (either separately or in 3D view), and overlayed surface visualization of cortex, skull, and scalp * Cortical surface extraction, using a multi-stage user friendly approach. * Tools including brain surface extraction, bias field correction, voxel classification, cerebellum removal, and surface generation * Topological correction of cortical surfaces, which uses a graph-based approach to remove topological defects (handles and holes) and ensure a tessellation with spherical topology * Parameterization of generated cortical surfaces, minimizing a harmonic energy functional in the p-norm * Skull and scalp surface extraction

Resource Type: Resource, software resource, image analysis software, data visualization software, data processing software, software application
References: PMID:12045000

Keywords: brain, magnetic resonance, image, analysis, human, topology, segmentation, visualization, cortex, cortical, mri, tissue classification, topological correction, rendering, edit, cortical surface

Parent Organization: Biomedical Informatics Research Network

Funding Agency: NCRR, NIBIB, NIMH

Availability: BrainSuite Software License, v2

Website Status: Last checked down

Abbreviations: BrainSuite

Resource Name: BrainSuite

Resource ID: SCR_006623

Alternate IDs: nif-0000-30214

Alternate URLs: http://www.nitrc.org/projects/brainsuite

Ratings and Alerts

No rating or validation information has been found for BrainSuite.

No alerts have been found for BrainSuite.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 52 mentions in open access literature.

Listed below are recent publications. The full list is available at FDI Lab - SciCrunch.org.


Yu X, et al. (2021) Increased extracellular fluid is associated with white matter fiber
degeneration in CADASIL: in vivo evidence from diffusion magnetic resonance imaging. Fluids and barriers of the CNS, 18(1), 29.


