Diffusion Tensor Imaging ToolKit

RRID:SCR_001642
Type: Tool

Proper Citation

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Resource Information

URL: http://dti-tk.sourceforge.net/pmwiki/pmwiki.php

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Description: A spatial normalization and atlas construction toolkit optimized for examining white matter morphometry using DTI data with special care taken to respect the tensorial nature of the data. It implements a state-of-the-art registration algorithm that drives the alignment of white matter (WM) tracts by matching the orientation of the underlying fiber bundle at each voxel. The algorithm has been shown to both improve WM tract alignment and to enhance the power of statistical inference in clinical settings. A 2011 study published in NeuroImage ranks DTI-TK the top-performing tool in its class. Key features include: * open standard-based file IO support: NIfTI format for scalar, vector and tensor image volumes * tool chains for manipulating tensor image volumes: resampling, smoothing, warping, registration & visualization * pipelines for WM morphometry: spatial normalization & atlas construction for population-based studies * built-in cluster-computing support: support for open source Sun Grid Engine (SGE) * Interoperability with other popular DTI tools: AFNI, Camino, FSL & DTIStudio * Interoperability with ITK-SNAP: support multi-modal visualization and segmentation

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

Keywords: dti, visualization, segmentation, resampling, smoothing, warping, registration, spatial normalization, atlas construction, analysis, atlas application, intersubject, image-to-template, analyze, nifti-1, macos, linux

Parent Organization: SourceForge, University of Pennsylvania; Philadelphia; Pennsylvania
Funding Agency: NIBIB

Related resources: Diffusion MRI of Traumatic Brain Injury, Camino, MRI Studio

Availability: Available for download

Website Status: Last checked up

Abbreviations: DTI-TK

Resource Name: Diffusion Tensor Imaging ToolKit

Resource ID: SCR_001642

Alternate IDs: nlx_153914

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

Ratings and Alerts

- 4.5 / 5 (33 votes) Rated at NITRC http://www.nitrc.org/projects/dtitk

No alerts have been found for Diffusion Tensor Imaging ToolKit.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 15 mentions in open access literature.

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


