Resource Summary Report

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Camino

RRID:SCR_001638
Type: Tool

Proper Citation

Camino (RRID:SCR_001638)

Resource Information

URL: http://cmic.cs.ucl.ac.uk/camino/

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Description: Free, open-source, object-oriented software package for analysis and reconstruction of Diffusion MRI data, tractography and connectivity mapping. The toolkit implements standard techniques, such as diffusion tensor fitting, mapping fractional anisotropy and mean diffusivity, deterministic and probabilistic tractography. It also contains more specialized and cutting-edge techniques, such as Monte-Carlo diffusion simulation, multi-fibre and HARDI reconstruction techniques, multi-fibre PICo, compartment models, and axon density and diameter estimation. Camino has a modular design to enable construction of processing pipelines that include modules from other software packages. The toolkit is primarily designed for unix platforms and structured to enable simple scripting of processing pipelines for batch processing. Most users use linux, MacOS or a unix emulator like cygwin running under windows. However, the core code is written in Java and thus is simple to call from other platforms and programming environments, such as matlab running under unix or windows.

Abbreviations: Camino

Synonyms: UCL Camino Diffusion MRI Toolkit

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

Keywords: diffusion mri, reconstruction, processing, dti, tractography, connectivity mapping

Funding:

Availability: Available for download, Acknowledgement requested

Resource Name: Camino

Resource ID: SCR_001638

Alternate IDs: nlx_153907

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

License: Artistic License v2

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Ratings and Alerts

No rating or validation information has been found for Camino.

No alerts have been found for Camino.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 61 mentions in open access literature.

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

Xue X, et al. (2024) Mapping individual cortico-basal ganglia-thalamo-cortical circuits integrating structural and functional connectome: implications for upper limb motor impairment poststroke. MedComm, 5(10), e764.

Plachti A, et al. (2023) Stability of associations between neuroticism and microstructural asymmetry of the cingulum during late childhood and adolescence: Insights from a longitudinal study with up to 11 waves. Human brain mapping, 44(4), 1548.

Eikenes L, et al. (2023) Both brain size and biological sex contribute to variation in white matter microstructure in middle-aged healthy adults. Human brain mapping, 44(2), 691.

Knobe S, et al. (2022) Feasibility and clinical usefulness of modelling glioblastoma migration in adjuvant radiotherapy. Zeitschrift fur medizinische Physik, 32(2), 149.

Parker CS, et al. (2021) Not all voxels are created equal: Reducing estimation bias in regional NODDI metrics using tissue-weighted means. NeuroImage, 245, 118749.

Cottaar M, et al. (2021) Quantifying myelin in crossing fibers using diffusion-prepared phase imaging: Theory and simulations. Magnetic resonance in medicine, 86(5), 2618.

Metin MÖ, et al. (2021) Diffusion Tensor Imaging Group Analysis Using Tract Profiling and Directional Statistics. Frontiers in neuroscience, 15, 625473.

Madsen KS, et al. (2020) Maturational trajectories of white matter microstructure underlying the right presupplementary motor area reflect individual improvements in motor response cancellation in children and adolescents. NeuroImage, 220, 117105.

Hajiaghamemar M, et al. (2020) Embedded axonal fiber tracts improve finite element model predictions of traumatic brain injury. Biomechanics and modeling in mechanobiology, 19(3), 1109.

Fang C, et al. (2020) Diffusion MRI simulation of realistic neurons with SpinDoctor and the Neuron Module. NeuroImage, 222, 117198.

Haslbeck FB, et al. (2020) Creative music therapy to promote brain function and brain structure in preterm infants: A randomized controlled pilot study. NeuroImage. Clinical, 25, 102171.

Vinegoni C, et al. (2020) Fluorescence microscopy tensor imaging representations for large-scale dataset analysis. Scientific reports, 10(1), 5632.

Varela-Mattatall GE, et al. (2020) Comparison of q-Space Reconstruction Methods for Undersampled Diffusion Spectrum Imaging Data. Magnetic resonance in medical sciences : MRMS : an official journal of Japan Society of Magnetic Resonance in Medicine, 19(2), 108.

Andersson M, et al. (2020) Axon morphology is modulated by the local environment and impacts the noninvasive investigation of its structure-function relationship. Proceedings of the National Academy of Sciences of the United States of America, 117(52), 33649.

Hahn G, et al. (2019) A new computational approach to estimate whole-brain effective connectivity from functional and structural MRI, applied to language development. Scientific reports, 9(1), 8479.

Haddad SMH, et al. (2019) Comparison of quality control methods for automated diffusion tensor imaging analysis pipelines. PloS one, 14(12), e0226715.

Hinton KE, et al. (2019) White matter microstructure correlates of general and specific second-order factors of psychopathology. NeuroImage. Clinical, 22, 101705.

Li JR, et al. (2019) SpinDoctor: A MATLAB toolbox for diffusion MRI simulation. NeuroImage, 202, 116120.

Ding G, et al. (2019) Differences between normal and diabetic brains in middle-aged rats by MRI. Brain research, 1724, 146407.

Hinton KE, et al. (2018) Right Fronto-Subcortical White Matter Microstructure Predicts Cognitive Control Ability on the Go/No-go Task in a Community Sample. Frontiers in human neuroscience, 12, 127.