Resource Summary Report

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TORTOISE

RRID:SCR_001645
Type: Tool

Proper Citation

TORTOISE (RRID:SCR_001645)

Resource Information

URL: https://github.com/QMICodeBase/TORTOISEV4

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Description: An integrated and flexible software package for processing of DTI data, and in general for the correction of diffusion weighted images to be used for DTI and potentially for high angular resolution diffusion imaging (HARDI) analysis. It can be run on both Linux and Mac platforms. It is composed of two modules named DIFF PREP and DIFF CALC. * DIFF_PREP - software for image resampling, motion, eddy current distortion and susceptibility induced EPI distortion corrections, and for re-orientation of data to a common space * DIFF_CALC - software for tensor fitting, error analysis, color map visualization and ROI analysis In addition, TORTOISE contains additional Utilities, such as a tool for the analysis of multi-center phantom data.

Abbreviations: TORTOISE

Synonyms: Tolerably Obsessive Registration and Tensor Optimization Indolent Software Ensemble

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

Keywords: diffusion mri, dti, image motion correction, distortion correction, tensor computation, visualization, analysis, tensor fitting, modeling, magnetic resonance, tensor metric

Funding: NICHD

Availability: Free, Available for download, Freely available

Resource Name: TORTOISE

Resource ID: SCR_001645

Alternate IDs: nlx_153921

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

License: Other/Commercial license License, TORTOISE License

Record Creation Time: 20220129T080208+0000

Record Last Update: 20260806T054325+0000

Ratings and Alerts

No rating or validation information has been found for TORTOISE.

No alerts have been found for TORTOISE.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 101 mentions in open access literature.

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

Loução R, et al. (2025) Structural Connectivity of the Basal Ganglia from Patient-Individual Tractography Is Key for Understanding the Effects of Deep Brain Stimulation in Parkinson's Disease. Stereotactic and functional neurosurgery, 103(4), 279.

Di Stefano M, et al. (2025) Characterizing white matter hyperintensities in myotonic dystrophy type 1 through IVIM derived metrics. Scientific reports, 15(1), 42996.

Schalk L, et al. (2025) White matter microstructure of the cingulum bundle and the uncinate fasciculus in primary and secondary callous-unemotional traits. European child & adolescent psychiatry, 34(12), 4035.

Saini F, et al. (2025) White matter trajectories in Down syndrome and Alzheimer's disease: Insights from diffusion tensor-based morphometry. Alzheimer's & dementia : the journal of the Alzheimer's Association, 21(6), e70382.

Jinnou H, et al. (2025) Outer radial glia promotes white matter regeneration after neonatal brain injury. Cell reports. Medicine, 6(3), 101986.

Roos A, et al. (2025) The impact of prenatal alcohol and tobacco exposure on white matter integrity in 8-12-year-old children. NeuroImage. Clinical, 48, 103886.

Wang S, et al. (2024) Post-mortem changes of anisotropic mechanical properties in the porcine brain assessed by MR elastography. Brain multiphysics, 6.

Donald KA, et al. (2024) Prenatal alcohol exposure and white matter microstructural changes across the first 6-7 years of life: A longitudinal diffusion tensor imaging study of a South African birth cohort. NeuroImage. Clinical, 41, 103572.

Magondo N, et al. (2024) Distinct alterations in white matter properties and organization related to maternal treatment initiation in neonates exposed to HIV but uninfected. Scientific reports, 14(1), 8822.

Madzime J, et al. (2024) Reduced white matter maturation in the central auditory system of children living with HIV. Frontiers in neuroimaging, 3, 1341607.

Pas KE, et al. (2024) Direct segmentation of cortical cytoarchitectonic domains using ultra-high-resolution whole-brain diffusion MRI. bioRxiv : the preprint server for biology.

Manninen E, et al. (2024) Variability of multidimensional diffusion-relaxation MRI estimates in the human brain. Imaging neuroscience (Cambridge, Mass.), 2.

Comrie CJ, et al. (2024) Identification of diffusion, kurtosis, and propagator MRI markers of Alzheimer's disease pathology in post-mortem human tissue. Imaging neuroscience (Cambridge, Mass.), 2.

Pas KE, et al. (2024) Direct segmentation of cortical cytoarchitectonic domains using ultra-high-resolution whole-brain diffusion MRI. Imaging neuroscience (Cambridge, Mass.), 2.

Magondo N, et al. (2024) Distinct alterations in white matter properties and organization related to maternal treatment initiation in neonates exposed to HIV but uninfected. bioRxiv : the preprint server for biology.

McKay CC, et al. (2024) Modeling Shared and Specific Variances of Irritability, Inattention, and Hyperactivity Yields Novel Insights Into White Matter Perturbations. Journal of the American Academy of Child and Adolescent Psychiatry, 63(12), 1239.

Takemura H, et al. (2024) A prominent vertical occipital white matter fasciculus unique to primate brains. Current biology : CB, 34(16), 3632.

Bouhrara M, et al. (2023) Adult lifespan maturation and degeneration patterns in gray and white matter: A mean apparent propagator (MAP) MRI study. Neurobiology of aging, 124, 104.

Wang S, et al. (2023) Mechanical stiffness and anisotropy measured by MRE during brain development in the minipig. NeuroImage, 277, 120234.

Williamson BJ, et al. (2023) Altered white matter connectivity in children with congenital heart disease with single ventricle physiology. Scientific reports, 13(1), 1318.