Resource Summary Report

Generated by RRID on Aug 4, 2026

MRtrix

RRID:SCR_006971
Type: Tool

Proper Citation

MRtrix (RRID:SCR_006971)

Resource Information

URL: http://www.brain.org.au/software/mrtrix/

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Description: A set of tools to perform diffusion-weighted MRI white matter tractography in the presence of crossing fibres, using Constrained Spherical Deconvolution (Tournier et al.. 2004; Tournier et al. 2007), and a probabilisitic streamlines algorithm (e.g. Behrens et al., 2003; Parker et al., 2003). These applications have been written from scratch in C++, using the functionality provided by the GNU Scientific Library, and gtkmm. The software is currently capable of handling DICOM, NIfTI and AnalyseAVW image formats, amongst others. Installation * Unix/Linux * Microsoft Windows * Mac Os X, THIS RESOURCE IS NO LONGER IN SERVICE. Documented on September 16,2025.

Abbreviations: MRtrix

Resource Type: software toolkit, software application, data processing software, source code, software resource

Keywords: white matter tractography, diffusion mri, tractography, fiber tracking, crossing fiber, constrained spherical deconvolution, diffusion mr fiber tracking, image display, dti, linux, c++, analyze, bshort, bfloat, dicom, nifti-1, magnetic resonance

Availability: THIS RESOURCE IS NO LONGER IN SERVICE

Resource Name: MRtrix

Resource ID: SCR_006971

Alternate IDs: nlx_153918

Alternate URLs: http://www.nitrc.org/projects/mrtrix/, https://sources.debian.org/src/mrtrix/

License: GNU GPL

Record Creation Time: 20220129T080239+0000

Record Last Update: 20260804T043314+0000

Ratings and Alerts

No rating or validation information has been found for MRtrix.

No alerts have been found for MRtrix.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 205 mentions in open access literature.

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

Kanel D, et al. (2025) Structure-function coupling in network connectivity and associations with negative affectivity in a group of transdiagnostic adolescents. Journal of mood and anxiety disorders, 9.

Ruan J, et al. (2025) Connectional differences between humans and macaques in the MT+ complex. iScience, 28(1), 111617.

Dollomaja B, et al. (2025) Virtual epilepsy patient cohort: Generation and evaluation. PLoS computational biology, 21(4), e1012911.

Tinney EM, et al. (2025) White matter microstructure mediates the association between cardiorespiratory fitness and cognitive performance in older adults. Alzheimer's & dementia (New York, N. Y.), 11(3), e70125.

Quabs J, et al. (2025) Structural Connectivity Differences Reflect Microstructural Heterogeneity of the Human Insular Cortex. Human brain mapping, 46(8), e70231.

Raikes AC, et al. (2025) White matter micro- and macrostructural properties in midlife individuals at risk for Alzheimer's disease: Associations with sex and menopausal status. bioRxiv : the preprint server for biology.

Beyer F, et al. (2025) Exploring the effect of multi-modal intervention against cognitive decline on atrophy and small vessel disease imaging markers in the AgeWell.de imaging study. NeuroImage. Clinical, 46, 103796.

Haverland B, et al. (2025) Human cortical high-gamma power scales with movement rate in healthy participants and stroke survivors. The Journal of physiology, 603(4), 873.

Popp JL, et al. (2025) Structural-functional brain network coupling during cognitive demand reveals intelligence-relevant communication strategies. Communications biology, 8(1), 855.

Wallstein N, et al. (2025) An unconstrained four pool model analysis of proton relaxation and magnetization transfer in ex vivo white matter. Scientific reports, 15(1), 4354.

Rivas-Fernández MÁ, et al. (2025) Brain microstructure alterations in subjective cognitive decline: a multi-component T2 relaxometry study. Brain communications, 7(1), fcaf017.

Hu HY, et al. (2025) Microstructural white matter injury contributes to cognitive decline: Besides amyloid and tau. The journal of prevention of Alzheimer's disease, 12(2), 100037.

Wang Z, et al. (2025) Along-Tract Diffusion Alterations in the Dentato-Rubro-Thalamic Tract Correlate With Motor and Cognitive Decline in Huntington's Disease. Human brain mapping, 46(11), e70305.

van der Hoorn A, et al. (2025) Assessing the Validity of Diffusion Weighted Imaging Models: A Study in Patients with Post-Surgical Lower-Grade Glioma. Journal of clinical medicine, 14(2).

Jansen J, et al. (2025) Differentiating unirradiated mice from those exposed to conventional or FLASH radiotherapy using MRI. bioRxiv : the preprint server for biology.

Zhang K, et al. (2025) Brain plasticity associated with prolonged shooting training: a multimodal neuroimaging investigation from a cross-sectional study. Frontiers in human neuroscience, 19, 1530642.

Perera MR, et al. (2025) Imaging and Image Processing Techniques for High-Resolution Visualization of Connective Tissue with MRI: Application to Fascia, Aponeurosis, and Tendon. Journal of imaging, 11(2).

Schifani C, et al. (2025) In Vivo Cortical Microstructure: Relationships With Tauopathy and Cognitive Impairment in the Elderly. Journal of neurochemistry, 169(8), e70167.

Witt AA, et al. (2025) Tract-specific analysis of diffusion MRI at 3T detects cervical spinal cord aberrations in multiple sclerosis. Imaging neuroscience (Cambridge, Mass.), 3.

Uchida Y, et al. (2025) Quantification of perforant path fibers for early detection of Alzheimer's disease. Alzheimer's & dementia : the journal of the Alzheimer's Association, 21(4), e70142.