

Resource Summary Report

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PANDA

RRID:SCR_002511

Type: Tool

Proper Citation

PANDA (RRID:SCR_002511)

Resource Information

URL: <http://code.google.com/p/panda-tool/>

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Description: Software matlab toolbox for pipeline processing of diffusion MRI images. For each subject, PANDA can provide outputs in 2 types: i) diffusion parameter data that is ready for statistical analysis; ii) brain anatomical networks constructed by using diffusion tractography. Particularly, there are 3 types of resultant diffusion parameter data: WM atlas-level, voxel-level and TBSS-level. The brain network generated by PANDA has various edge definitions, e.g. fiber number, length, or FA-weighted. The key advantages of PANDA are as follows: # fully-automatic processing from raw DICOM/NIFTI to final outputs; # Supporting both sequential and parallel computation. The parallel environment can be a single desktop with multiple-cores or a computing cluster with a SGE system; # A very friendly GUI (graphical user interface).

Abbreviations: PANDA

Synonyms: PANDA: a pipeline tool for diffusion MRI, PANDA (Pipeline for Analyzing brain Diffusion imAges), Pipeline for Analyzing brain Diffusion imAges, PANDA: Pipeline for Analyzing brain Diffusion imAges, panda-tool

Resource Type: software resource, software toolkit

Defining Citation: [PMID:23439846](#)

Keywords: analyze, computational neuroscience, connectivity analysis, dicom, format conversion, gnome, linux, macos, matlab, modeling, magnetic resonance, nifti, posix/unix-like, tensor metric, tractography, workflow, xnat pipeline, diffusion mri, chinese, connectome, diffusion metrics, network, pipeline, structural connectivity

Funding: National Natural Science Foundation of China ;
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Availability: Free, Available for download, Freely available

Resource Name: PANDA

Resource ID: SCR_002511

Alternate IDs: nlx_155911

Alternate URLs: <http://www.nitrc.org/projects/panda>

License: GNU General Public License v3

Record Creation Time: 20220129T080213+0000

Record Last Update: 20260905T132449+0000

Ratings and Alerts

No rating or validation information has been found for PANDA.

No alerts have been found for PANDA.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 427 mentions in open access literature.

Listed below are recent publications. The full list is available at [PRECISE-TBI](#) .

An J, et al. (2026) Multimodal MRI Assessment of neuroprotective effects of Ofatumumab on brain structure, function, and clinical correlates in Relapsing Multiple Sclerosis. *Frontiers in neurology*, 17, 1738469.

Ning X, et al. (2026) Role of disturbed structural connectivity network in patients with white matter lesions and cognitive impairment revealed by diffusion-tensor magnetic resonance imaging. *The Journal of international medical research*, 54(5), 3000605261431456.

Yang L, et al. (2026) Crosstalk of peripheral cytokine-white matter alteration-insomnia during methadone maintenance treatment. *Psychological medicine*, 56, e113.

Wu CL, et al. (2026) Structural nodal efficiency in executive-function-related regions moderates individual and paired-player creativity. *Frontiers in psychology*, 17, 1781779.

Cai K, et al. (2026) Targeting the Cerebellar Circuit: How Exercise Intervention Reshapes White Matter Networks to Alleviate Autism Symptoms. *Biology*, 15(12).

Falk L, et al. (2026) A data-driven SSM/PCA analysis approach for differential diagnosis of parkinsonism using 11C-PE2I PET. *NeuroImage. Clinical*, 49, 103970.

Zhuang J, et al. (2026) Alterations of White Matter Structural Brain Network in Children With Sensorineural Hearing Loss: A Graph Theory Analysis for Auditory Sensitivity Period. *Neural plasticity*, 2026(1), e4263849.

Ramadan AH, et al. (2026) Mapping mismanaged plastic waste in Indonesia: subdistrict-level analysis through material flow from sources to the environment. *Scientific reports*, 16(1).

Lin G, et al. (2026) Multimodal MRI and machine learning for identifying depression in cerebral small vessel disease: a multicenter study. *BMC medical imaging*, 26(1).

Butt NA, et al. (2026) Benchmarking multiple instance learning architectures from patches to pathology for prostate cancer detection and grading using attention-based weak supervision. *Scientific reports*, 16(1).

Zhang J, et al. (2026) Digital twin brain reveals state-specific stimulation targets for abnormal brain dynamics in tinnitus. *BMC medicine*, 24(1).

Qin Y, et al. (2026) Analysis of correlation between structural changes and functional response in post-stroke motor recovery after cM1 LF-rTMS: an exploratory randomized trial. *Scientific reports*, 16(1), 4460.

Xu Y, et al. (2026) Gut Lachnospiraceae improves white matter injury-related cognitive decline by increasing L-arginine. *Cellular & molecular biology letters*, 31(1).

Wang J, et al. (2026) Functional Changes in the Glymphatic System in Children With Sensorineural Hearing Loss: A Study of Diffusion Tensor Imaging. *Neural plasticity*, 2026, 4484163.

Qian X, et al. (2026) Altered salience network structure-function integration underlies the decline in cognitive flexibility during aging. *PLoS biology*, 24(4), e3003738.

Zhou R, et al. (2026) Amyloid-beta statuses prediction with free water MR imaging features in Alzheimer's disease using machine learning models. *BMC medical imaging*, 26(1).

Zhang Y, et al. (2026) Integrated IP-MS and Optoproteomics Reveal Dynamic Remodeling of Protein Interaction Networks During NLRP3 Inflammasome Activation. *Molecular & cellular proteomics : MCP*, 25(7), 101595.

Mostazir MBA, et al. (2026) Non-adherence in randomised controlled trials: empirical comparison of treatment policy and efficacy estimands using individual participant data. *BMC medical research methodology*, 26(1), 40.

Thibieroz N, et al. (2026) Cell Analyser in Batch for Neurite (CABaNe), an Automated, High-Throughput ImageJ Macro for Cell and Neurite Analysis. *eNeuro*, 13(2).

Chu T, et al. (2026) Comparative Analysis of Lysis Buffers for Enhanced Proteomic and Glycoproteomic Profiling. *Biomolecules*, 16(2).