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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973 program ;

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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: 20260912T195542+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 SPARC SAWG .

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).

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.

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

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).