

# Resource Summary Report

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## PANDA

RRID:SCR\_002511

Type: Tool

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### Proper Citation

PANDA (RRID:SCR\_002511)

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### Resource Information

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

**Proper Citation:** PANDA (RRID:SCR\_002511)

**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 ;  
Beijing Nova Program ;  
973 program ;

State Key Laboratory of Cognitive Neuroscience and Learning

**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:** 20260903T234529+0000

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## Ratings and Alerts

No rating or validation information has been found for PANDA.

No alerts have been found for PANDA.

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## Data and Source Information

**Source:** [SciCrunch Registry](#)

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## Usage and Citation Metrics

We found 427 mentions in open access literature.

**Listed below are recent publications.** The full list is available at [dkNET](#) .

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.

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

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.

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

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).
- 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).
- 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.
- 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).
- Cai K, et al. (2026) Targeting the Cerebellar Circuit: How Exercise Intervention Reshapes White Matter Networks to Alleviate Autism Symptoms. *Biology*, 15(12).
- 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.
- 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).
- 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.
- Chu T, et al. (2026) Comparative Analysis of Lysis Buffers for Enhanced Proteomic and Glycoproteomic Profiling. *Biomolecules*, 16(2).