

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 toolkit, software resource

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

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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 376 mentions in open access literature.

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

Lu Y, et al. (2025) Detection of structural-functional coupling abnormalities using multimodal brain networks in Alzheimer's disease: A comparison of three computational models. *NeuroImage. Clinical*, 46, 103764.

Pelissier A, et al. (2025) BACH1 as a key driver in rheumatoid arthritis fibroblast-like synoviocytes identified through gene network analysis. *Life science alliance*, 8(1).

Ji Y, et al. (2025) Disrupted topological organization of brain connectome in patients with chronic low back related leg pain and clinical correlations. *Scientific reports*, 15(1), 7515.

Gao Z, et al. (2025) Combined Functional and Structural Imaging of White Matter Reveals Brain Connectivity Alterations in Fibromyalgia Patients. *Journal of pain research*, 18, 3361.

Wu X, et al. (2025) Characterization of the white matter networks in schizophrenia patients with metabolic syndrome undergoing risperidone or clozapine treatment. *Frontiers in neuroscience*, 19, 1579810.

Lu W, et al. (2025) Potential compensatory mechanism for cognitive impairment in type 2 diabetes and prediabetes: altered structure-function coupling. *Frontiers in endocrinology*, 16, 1491377.

Qiu L, et al. (2025) Multi-Parameter MRI for Evaluating Glymphatic Impairment and White-Matter Abnormalities and Discriminating Refractory Epilepsy in Children. *Korean journal of radiology*, 26(5), 485.

Wang Y, et al. (2025) Disruption of Multimodal Brain Networks and Structural-Functional Coupling in Adolescents with Major Depressive Disorder. *Neuropsychiatric disease and treatment*, 21, 791.

Chu T, et al. (2025) Network control theory uncovers aberrant connectome controllability in trigeminal neuralgia. *The journal of headache and pain*, 26(1), 174.

Ma Z, et al. (2025) Deep learning-based reconstruction of monthly Antarctic surface air temperatures from 1979 to 2023. *Scientific data*, 12(1), 847.

Arulsamy K, et al. (2025) SCIG: Machine learning uncovers cell identity genes in single cells by genetic sequence codes. *Nucleic acids research*, 53(10).

Matsuura T, et al. (2025) Selective identification of polyploid hepatocellular carcinomas with poor prognosis by artificial intelligence-based pathological image recognition. *Communications medicine*, 5(1), 270.

Melchert S, et al. (2025) Social cognitive impact of essential tremor. *Scientific reports*, 15(1), 23591.

Fa??ndez-Lizama T, et al. (2025) Feasibility-guided evolutionary optimization of pump station design and operation in water networks. *Scientific reports*, 15(1), 34455.

Deng HW, et al. (2025) Novel Pathological Mechanisms Revealed by Spatial Transcriptomic Analysis of Hippocampus in Aged Control, Primary Age-Related Tauopathy, and Alzheimer's Disease. *Research square*.

Li S, et al. (2025) Alterations of Brain Structural and Functional Connectivity Networks and Its Correlations With Cognitive Function in Patients With Hypothalamic Syndrome Following Craniopharyngioma Resection. *Brain and behavior*, 15(8), e70730.

Wang X, et al. (2025) Preoperative structural networks based on DTI predicts initial subthalamic nucleus stimulation outcome in parkinson's disease. *Scientific reports*, 15(1), 29729.

Yang C, et al. (2025) Thermal Proteome Profiling Reveals Meltome Upon NLRP3 Inflammasome Activation. *Molecular & cellular proteomics : MCP*, 24(5), 100972.

Chen Y, et al. (2025) Intractable prefrontal and limbic white matter network disruption in adolescents with drug-na??ve nonsuicidal self-injury. *BMC psychiatry*, 25(1), 662.

Lin CH, et al. (2025) Frailty subtypes and white matter alterations in older adults without dementia. *Psychiatry and clinical neurosciences*, 79(10), 677.